Pseudo-Mints Again: A Die-Study

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Pseudo-Mints Again: A Die-Study

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Princesse, ce loz je vous porte
Que sans vous je ne feusse rien
A vous et a tous m'en rapporte,
On doit dire du bien le bien.
François Villon

Introduction[2]

Suzanne Frey-Kupper and I coined the term, 'pseudo-mint', to denote the systematic imitation, over a period of time, by a single emitter, of an issue or issues of one or more foreign mints. We needed the term to distinguish this phenomenon from casual imitation, and from counterfeiting[3]. It is pseudo-mints that first brought us together, that still exercises us, and that provides me with an apt topic for a volume celebrating Suzanne, our friendship, and her numismatics.

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[1] In this paper, the analysis of the imitative issues were prepared by Stannard, and when 'I' is used in the text, he is the speaker. Federico Carbone is currently preparing a die-study of Paestan bronze, after a thesis on *La produzione monetale a Paestum tra I a.C. e I d.C.*, in the Facoltà di Lettere e Filosofia at the Università degli Studi di Salerno, under the guidance of Professor Renata Cantilena. We collaborated in the assembly and analysis of coins of the genuine Paestan issue (Prototype **D**), and research on imitative coins found at Paestum, and 'we' refers to us jointly.

[2] We thank Rick Witschonke and Warren Esty for reading a draft of this paper, and for their valuable suggestions.

[3] FREY-KUPPER – STANNARD 2010, p. 352: 'The phenomenon is qualitatively different from the casual copying of a few individual coins by forgers, or diffuse, widespread copying, examples of which are the British copies of Claudian asses and — on a larger scale — the epidemic imitation of *antoniniani* in the third quarter of the third century AD in the northeastern provinces.' We would not consider the work of counterfeiters, no matter how long their activities lasted, as constituting a pseudo-mint.

There are at least two major groups of imitations in central Italy in late Hellenistic times, both exclusively comprising bronze small change. I have until now assumed that the two groups were struck by two distinct pseudo-mints.

I discovered the first, 'Pseudo-Ebusus/Massalia', in 1998, but, at that stage, identified only its Pseudo-Ebusan component[4]. After Andrew Wallace-Hadrill invited me to look at the coins from the British School excavations in the House of Amarantus in Pompeii[5], where there were many 'Ebusan' types (both canonical Ebusan and imitative coins), and arranged for me to see the coins from a number of other excavations, I realised that the imitations included not only Pseudo-Ebusan types, but also a variety of non-Ebusan types to which they were die-linked. In the article that came from that study, I showed that Massalia was also copied in the Pompeian material, but did not yet realise that Pseudo-Ebusus, with its other die-linked imitative types, and Pseudo-Massalia, formed a single pseudo-mint[6].

Suzanne and I discussed this pseudo-mint in 2008[7] and 2010[8], tying the pieces together more systematically, and using the name, 'Pseudo-Ebusus/Massalia', despite the Roman and perhaps other Italian prototypes that were also imitated. There is now evidence that an Athenian type was also imitated[9]. In two subsequent articles, I have looked at the pseudo-mint in the archaeological context at Pompeii, working with Albert Ribera[10]: everything suggests that the mint was probably in Pompeii, and so I now call it the 'Pompeian Pseudo-Mint'.

My understanding of the imitations that I discuss in this paper followed a similar development. I thought, in 1998[11], when I first identified some of its issues, that 'Pseudo-Panormos' characterised it adequately[12]. In 2010, Suzanne and I expanded the inventory of types in Pseudo-Panormos to

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[4] STANNARD 1998, p. 222-227.

[5] I.9.11-12, FULFORD – WALLACE-HADRILL 1999.

[6] STANNARD 2005.

[7] STANNARD – FREY-KUPPER 2008.

[8] FREY-KUPPER – STANNARD 2010.

[9] STANNARD – PARDINI 2011.

[10] STANNARD forthcoming, and RIBERA – SALAVERT – STANNARD forthcoming.

[11] STANNARD 1998, p. 219-222.

[12] FREY-KUPPER 1995 had already recognized that a number of seemingly Panormitan coins were imitations. She listed two sceptically under *Paestum*, noting their classification as coins of *Panormos* (?) in *SNG Cop*. 4 (p. 48, nos. 9 and 10, with the illustration of no. 9 unfortunately repeating the image of the obverse as the reverse), and two simply under Italy (p. 50, nos. 16-18).

include, as well, Paestum[13] and Rome[14], and called the pseudo-mint 'Pseudo-Panormos/Paestum'.

In 1998, I had also separately identified a group of issues that included pseudo-Termessan types[15].

I now want to review in detail the elements of Pseudo-Panormos/Paestum, to present a new group of imitations, including of Menaion in Sicily, and to revisit Pseudo-Termessos and associated types, in the light of a die-study that I have undertaken, with the aim of providing a systematic list of types, of investigating the structure of these issues, and of obtaining some measure of the volume of output, and their probable role in the economy.

More generally, I want to stress the importance of the fact that the pseudo-mints imitated, at one and the same time, a number of different prototypes, and of not isolating the imitations of individual mints — in particular of Rome[16] — from the whole, because the most interesting historical questions arise from this fact. Rome's military and economic expansion brought much minor foreign coin into central Italy in the 2nd and 1st c. BC. I will suggest that the diversity of the pseudo-mints' prototypes provides a mirror of the coins in daily use in central Italy in late Hellenistic times, in the context of a paucity of small change in an increasingly monetised economy. A fuller understanding of the phenomenon of pseudo-mints also help us consider whether or not the Roman Republican state aggressively policed its minor bronze coinage, whether it imposed this coinage on its allies, and how best to conjugate the concepts of 'imitation' and 'counterfeit' in this context.

The Dies

The die-study is based on a set of 229 legible coins that I have recorded over the years. These are listed in *Appendix 1*. There are many die-links among these coins, which makes it possible to gather together extensive

[13] Michael Crawford, in cataloguing the bronze coins of *Paestum*, had identified one of the types that I list here as 'probably an unofficial copy' (CRAWFORD 1973, p. 93, no. 32 var.; this is die-combination **O18 / R26** of this article).

[14] FREY-KUPPER – STANNARD 2010.

[15] STANNARD 1998, p. 218-219.

[16] CRAWFORD 1982 is a valuable compendium of imitations of Roman Republican bronze, but 'As far as classification is concerned, I have for the most part deliberately avoided linking groups into series' (p. 140). Of course, the phenomenon of imitations of Roman bronze is wider than the issues of the pseudo-mint that I discuss here. I do not wish to suggest that they were all the products of pseudo-mints.

groups of dies, which I illustrate on *plates 1-9*. I have assembled images of the individual obverse and reverse dies, using the best image I have of each die, and often not pairing the two faces of a single coins. Next to the link-lines, I give, as a number in a circle, the number of coins of the die-combination in the material studied. I then bring issues together into sets, that is, groups that belong together[17].

For the record, I have posted photographs of all the actual coins, in their groups, on the internet, at http://stannard.info.

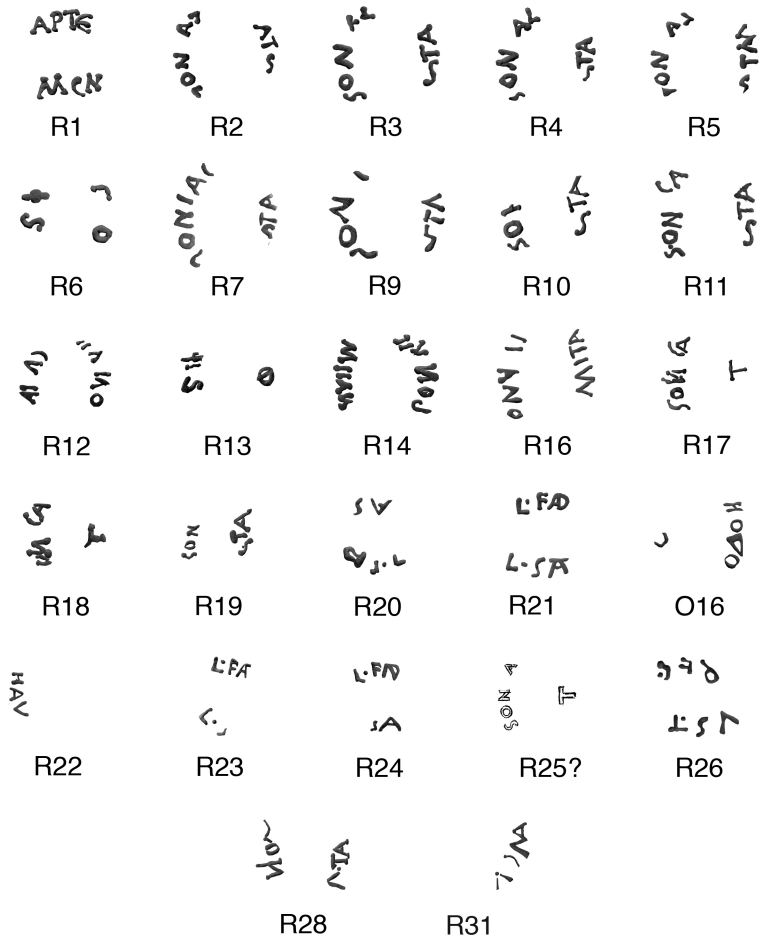

FIGURE 1: Legends.

[17] A set may also contain a single group.

The die-numbers are not intended to indicate the order in which the dies were used in production, either of groups, or within groups or sets.

Many of the legends are garbled, with malformed letters. Rather than attempt to describe the legends in the text, I have, where possible[18], assembled tracings of the legends in *fig. 1*.

Set 1: Groups 1-8

Groups 1 to 8 — which I shall call 'Set 1' — form a coherent whole, centred around imitations of the following Panormitan and Paestan prototypes (*fig. 2*).

FIGURE 2: Prototypes of Set 1, Panormos and Paestum.

Sicily, Panormos

c. 130/120 – 90 BC[19]

Obv. Laureate head of Zeus, left; border of dots.

Rev. Helmeted warrior standing half-left, holding *patera* and spear; the shield rests against the spear; **ΠA-NOP-MITAN** around; border of dots.

A. Æ 18 mm ↓ 3.46 g Gàbrici 1927, p. 154, nos. 36-43; Vienna 6679 (this coin)

c. 130/120 – 90 BC

Obv. Same as last, but head right; border of dots.

Rev. Same as last, but **ΠA-NOP-MITAN** up to left and right; border of dots.

B. Æ 15 mm ↖ 5.57 g Gàbrici 1927, p. 154, nos. 32-35; Vienna 4521 (this coin)

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[18] The specimens of **R8** and **R15** are too poorly preserved.

[19] For detailed arguments, FREY-KUPPER 2007, part I, chapter 4.5.2; FREY-KUPPER forthcoming (a), and STANNARD – FREY-KUPPER 2008, p. 362-363.

Lucania, Paestum

Mid 1st c. BC, Social War – Caesar[20], *semis*

Obv. Helmeted head, right; **S** behind; **PÆ** before upwards; border of dots.

Rev. Rudder and tiller; **M·OCT** above; **IIII·VIR** below; border of dots.

C. Æ 14 mm ↖ 2.66 g *HN Italy*, p. 116, no. 1248; CRAWFORD 1973, p. 91, no. 31/1; Liri 13.104 (this coin)

Obv. Same as last, but **PAE**.

Rev. Clasped hands; **L·FAD** above; **L·SAX** below; border of dots.

D. Æ 15 mm ↘ 2.42 g *HN Italy*, p. 116, no. 1250; CRAWFORD 1973, p. 91-93, no. 32; Liri 4.094 (this coin)

The heads on the obverses of coins with imitative Panormitan reverses vary greatly and do not follow Panormitan obverses: they are probably best seen not as imitations, but as individual creations.

There are two varieties of reverse warrior images. The first — which I shall call 'the Panormitan warrior' — is a fairly faithful copy of the Panormitan prototype, with a shield standing on edge on the ground next to his leg. (**R2**-**R5**, **R7**-**11**, **R12**[21], **R14**, **R16** and **R28**). The second — which I shall call 'the warrior with spear' — shows, instead, a warrior without a shield, holding only a spear, with the point down (**R6**, **R13**, **R17**-**R19**, **R22**, perhaps **R25?**[22] and **R27**).

The Paestan imitations copy both the obverse image: a helmeted head right (**O14**, **O15**, **O17** and **O18**); and the two reverses of their prototypes: the tiller and rudder of prototype **C**, with the addition of an arrow to right (**R1**), and the clasped hands of prototype **D** (**R20**, **R21**, **R23**, **R24** and **R26**).

With the exception of **R16**, probably with a correct Panormitan legend, and **R21** and **R23**, with correct Paestan legends, the legends on the imitations are different from those on the prototypes, and many are garbled.

Amongst the Panormitan warrior reverses, only **R16**, on which the warrior stands left, carries the standard prototype legend, **ΠANO[P]MITA[N]**.

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[20] Dated by *HN Italy*. **C** and **D** are similar in style and fabric, and are probably of a similar date. Crawford suggests dating the clasped hand type (**D**) from the appearance of a similar type on Roman coins in 48 and 42 BC: *RRC*, p. 466, no. 450/2 and p. 467, no. 451/1, *denarii*, two clasped hands holding a winged caduceus; p. 504, no. 494/10-12, *aurei*, no caduceus; and p. 508, no. 494/41, *denarius*, with caduceus.

[21] **R12** is not absolutely certain as, on the only coin from this die, the lower part of the image is missing.

[22] **R25?** is uncertain, as it is known only from an drawing of 1828. The stance and the legend are similar to **R17** and **R19**.

The other dies on which the warrior stands left (**R2**-**R5**, **R7**-**R11**) carry what I shall call 'the SONAL legend'. In its full form, this reads **SONAL** up to left, and **TA** up to right, with **S** to right below, which is probably the value-mark denoting a *semis*[23], but, as *fig. 1* shows, the legend is often imperfect and the letters malformed. Nonetheless, its persistence over so many dies suggests that it is meant to signify, though I cannot suggest what. The fact that the legend is in Latin letters, rather than in the Greek of the prototypes, shows clearly that these issues were in a Latin-speaking area.

R28, with the Panormitan warrior to left, is anepigraphic, except for **S** to left.

On two other dies (**R12** and **R14**), the Panormitan warrior stands right, and, on these dies, two different, garbled legends are used. The letters are malformed but Latinate. Judging by their length, they may derive from the full Panormitan legend.

The warrior with spear stands left on **R17**-**R19** and **R25?**, where he is accompanied by the SONAL legend, and, on **R31**, only by ⁝. The legend on **R22** is nonsense, and not obviously derived from anything.

He stands right on **R6** and **R13**, with a legend that reads **Φ S** down to left, and **S O**, or **S Θ**, down to right. The repetition of this legend on two reverses also suggests that it is meant to signify, but, again, I cannot suggest what. The legend is macaronic, mixing Latin and Greek letters.

Does the warrior with spear derive from the Panormitan type, is it imitated from another prototype, or is it an independent invention[24]? **R6** and **R13**, with their independent legend, suggest that some other type was being imitated, and, in this case, **R17**-**R19** and **R25?**, which combine the warrior with spear type with a SONAL legend, may result from conflation of the types and legends of the Panormitan warrior and the warrior with spear.

On the single reverse die that imitates the reverse of the Paestan prototype **C** (**R1**), the legend is clear, not copied from the prototype, and would appear to signify, but I cannot suggest what.

In Groups 6, 7 and 8, Panormitan warrior reverses link to imitations of both the obverse and reverse of Paestan prototype **D**. **O14**, **O15**, **O17** and **O18** all use the helmeted Paestan head, and **O14, O17** and **O18** also include the ethnic, **PAE**, and the mark of value, **S**. **O16**, with a head of Mercury wearing a winged *petasus*, and with a totally garbled legend, derives from a Roman *sextans*.

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[23] As on the Paestan prototypes.

[24] I shall return to this question when considering the warrior with spear in Set 2 (Group 9).

The Paestan reverse type — clasped hands and legend — is well-rendered on **R21** and **R23**[25]. Both the images and the legends are defective on **R20**[26], **R24**, and **R26**[27]. On these dies, the die-sinker has struggled with the type. He has not reversed the image in sinking the die, and as a result the image on the coin shows left hands shaking[28], hardly an auspicious image in the 1st c. BC. In any hand-shake, the thumbs are at the top of the hands, and this is how I show the dies on the *plates*, and in *fig. 3*.

FIGURE 3: Reversed hands and legends (at 150%).

Fig. 3, **α**[29], is a canonical Paestan reverse, with right hands shaking, and **R21** and **R23** are faithful copies. On **R24**, however, left hands are shown, and

[25] The single coin with **R23** is poorly preserved, but this reading is probable.

[26] Not catalogued in CRAWFORD 1973.

[27] Catalogued in CRAWFORD 1973, p. 93, and pl. XI, no. 32 var., as 'perhaps an unofficial copy', with the legend read as **V·S·T / Q·EC**.

[28] Such type reversals are also found in the Pompeian Pseudo-Mint, where Bes often raises his left, rather than his right hand; cf. STANNARD forthcoming, type-combination TC-28.

[29] LIBERO MANGIERI 2006, p. 159, no. 893, inv. 29466.

though the direction of the legend is correct, **L·SA** is garbled. With **R20**, recognising that something was wrong with the hands, the die-sinker rotated the die, so that the image was upside down, creating right hands shaking, but with thumbs down, before trying to copy the letters, and I have therefore rotated the legend of **R20** in *fig. 3*. In copying **L·FAD**, **L** is reversed and upside-down, **F** has no lower bar, the **Q**-like sign represents ligate **AD**, and only the **A** and **S** of **L·SA** survive. In the case of **R26**, he did not rotate the die and the image. The legend runs from left to right, but each individual letter of **L·FAD** is reversed, first **L·**, then **F**, then another **Q**-like symbol for the ligate **AD**. **L·SA** is reduced to something like **L·SA**, with **L** represented as an inverted **T**. The die-sinker or sinkers were clearly innocent of letters.

Because at least the die-pairs, **O15-R21** and **O17-R24**, as well as **R23**, could pass as genuine Paestan products, the question arises as to whether other imitations are hidden in the apparently normal coins of Paestum. For this reason, we reviewed 138 specimens of the genuine Paestan prototype **D**, of different degrees of readability, and did not find any other obverses that obviously belong with **O15-R21** and **O17-R24**, nor did we find any coin using either of the two reverse dies with well-formed legends (**R21** and **R23**).

We did, however, identify one coin that appears to be an early modern imitation (*fig. 4*)[30]. The lettering is diagnostic. For example: **S**, particularly on the obverse, is wider than the usual narrow form of the time; **P** is closed, instead of the open form (**Γ**) on the originals; and **A**, on the obverse, has an unnatural rounded top. The letters do not seem to have been cut, but traced into some soft mould. On the reverse, the legends are unnaturally far from the hands. The piece appears worn. It is probable that it was made for the antiquarian market in the late 18th or early 19th c.[31]

FIGURE 4: An early modern forgery (at 150%).

[30] Æ 18, 3.47 g, GB Collection on VStore internet site, 13 December 2012.

[31] The seller informed us that it came from a block of coins on the Parisian market.

I illustrate three states of **O15**. **O15a** is the earliest, but already shows signs of wear in the hair falling from the helmet. On **O15b**, a border of large dots has been added. On **O15c**, the border of dots has almost worn away, and repairs have been made, exaggerating the cheek and hair, and adding a crude dot for the eye.

There are also two die-states in **O18**. **O18a** is the earlier, and, on **O18b**, a similar dot for an eye has been added, as have as a number of wrinkles on the neck.

Set 2: Group 9

Set 2 is composed exclusively of Group 9. It includes a number of types that are difficult to attribute, and that are not used in other groups. Two of the die-pairs (**O19**[32]-**R27** and **O21**-**R30**) are common, but most of the dies are known in only one pairing. The group, nonetheless, is heavily die-linked: one obverse (**O22**) is linked to a single reverse, two are linked to two (**O19** and **O20**), and two are linked to three (**O21** and **O23**).

R30 imitates a Roman *quadrans*, and the prow left is a further example of a type that has been reversed, by clumsy copying of a prototype with prow right, rather than a correct copy of a prototype with prow left. The obverse, **O21**, with a diademed and bearded head right, does not seem to be from a Roman prototype. If it is not an independent creation, Zeus on a Sicilian coin may have been the prototype.

Of the other obverses, three (**O20**, **O22** and **O23**) carry helmeted heads, the first two right, and the third left. **O19** is a beardless and diademed head right. For none of these are prototypes evident. If Set 2 is to be grouped with the Set 1, then the helmeted heads of the Paestan prototype **D** may be the model.

Of the reverses, two dies carry an eagle left with wings open, **R29** on a thunder-bolt, and **R32** on a simple line. There is no obvious prototype. **R28** appears to be the Panormitan warrior left, with the grounded shield and spear. The figure on **R27** has no shield and is clearly the warrior with spear right. **R31** also carries the warrior with spear, but left.

On **R27**, the legend is neither a garbled version of **ΠANOPMITAN**, nor the SONAL legend. **R31** is anepigraphic, except for the quadrantal value mark, ⁝, to left. These differences again raise the question as to whether the warrior with spear, in Set 1 and in Set 2, is a variant of the

[32] There may be two die states, a first without, and a second with a border of dots, as in the case of **R15**, but I cannot be certain of this, because of the poor conservation of many specimens, and because the flans are rather short.

Panormitan warrior (thus an independent invention), or derives from some other prototype. If the latter is the case — and these two dies support this possibility — the reverse of the Aitnaian coin in *fig. 5* is a candidate, including because it also carries the value-mark, as on **R31**. I would, however, not wish to be dogmatic about this, because the quality of evidence is not adequate.

FIGURE 5: The warrior with spear at Aitnai.

Sicily, Aitnai

After 211 – early 2nd c. BC[33], *trias*

Obv. Radiate bust of Apollo right.

Rev. Warrior standing left, with a grounded spear in his right hand, and a shield on his left arm; ⁝ to left; **AIT-NAIΩN** around.

E. Æ 20 mm ↑ 5.44 g *SNG* ANS 3, nos. 1160-1161; ArtCoins Roma, Web Auction 5 (14 May 2012), no. 93 (this coin)

Does Set 2 (Group 9) belong with Set 1 (Groups 1-8)? The flans and general striking technique are similar, as are the weights (*tab. 1*). The low skewness and kurtosis[34] are consistent with the flans having been struck as cast, without adjustment of the weight, as is the case with most ancient bronze coinage[35]. The high coefficients of variation[36] show that the range of weights in individual groups was wide, and the wide variation in the means of the groups shows that the slight difference in the means of Set 1 and Set 2 is without significance. In terms of metrology, it is therefore impossible to distinguish Set 1 and Set 2.

[33] For the date: FREY-KUPPER 2007, p. 188-190; FREY-KUPPER forthcoming, p. 33-34.

[34] Set 1: skewness = 0.58, kurtosis = 0.85; set 2: skewness = 1.06, kurtosis = 1.73.

[35] STANNARD 2011, p. 430.

[36] CV = standard deviation as a percentage of the mean.

Sample	n	Mean	CV
	Set 1		
Gr 1	27	3.40 g	20.8%
Gr 2	16	3.11 g	9.9%
Gr 3	18	3.13 g	15.0%
Gr 4	9	2.46 g	13.0%
Gr 5	20	3.24 g	19.4%
Gr 6	18	3.49 g	13.4%
Gr 7	14	2.96 g	15.1%
Gr 8	11	2.91 g	17.8%
Gr. 1-8 = Set 1	148	3.17 g	18.4%
	Set 2		
Gr. 9 = Set 2	26	2.88 g	17.4%

TABLE 1: Metrology of Sets 1 and 2.

In terms of style, the very large dots in the crude borders on **O15**, **O19** in Set 1, and **R30** in Set 2, in particular, are unusual, and this suggests that the two groups belong together. The borders on both **O15** and **O19** are also irregular, probably because they were both added after the image, and without a clear, initial guiding circle scratched in with a compass.

The factors that might argue for Set 2 not belonging with Set 1 are the uniqueness of the garbled legend on **R27**, and the use of a quadrantal value-mark on **R30** and **R31**, when, as we have seen, **S** for *semis* characterises Set 1. However, it appears that **R28** has an **S** to the left of the Panormitan warrior, and, if this is the case, the value-marks for both a *semis* and a quadrans are used within the one die-linked group, so this would not be a sufficient argument to disassociate Set 1 and Set 2.

All things considered, it is probable that Sets 1 and 2 belong to the same pseudo-mint.

Set 3: Group 11

Set 3 is composed exclusively of Group 10, a mere six coins[37]. It shares no types with any other set. **R33** and **R36** imitate a coin of Menaion in Sicily (*fig. 6*). The ethnic on both the imitative dies is clear and well formed,

[37] It has not been published in any of my previous articles.

though the overall style of this group is poor. Whereas the prototype carries a bearded head of Herakles, the two obverse dies in this group (**O24** and **O25**) carry a beardless head of Hercules, wearing the lion's skin, imitated from the Roman *quadrans*.

F

FIGURE 6: Prototype of Set 3: Menaion.

Sicily, Menaion

After 211 – 2nd century BC (an early 2nd century BC date is most probable)[38]; *trias*

Obv. Head of Herakles, right; border of dots.

Rev. Club and ⁝; **MENA-INΩN**.

F. Æ 15 mm → 2.79 g *SNG ANS* 4, nos. 288-289; BM1947 Cameron 6-6-62 (this coin)

I think **O24b** is a recutting of **O24a**, but this is not certain. I cannot suggest a prototype for **R34**; it may be an independent invention. If **R35**, with **A͞**, is a imitation, rather than an independent invention, the prototype would be *RRC*, p. 241, nos. 192/2-4, of 168-158 BC, though I doubt this. I have few weights for Group 11: three weighed pieces average 2.37 g. This is lighter than any group in Sets 1 and 2. On balance, I am inclined to think that Set 3 does not belong with Sets 1 and 2.

Set 4, Groups 11, 12, 13 and 14

Groups 11 and 12 form a cluster. In each group, one of the reverse dies (**R38** and **R41**) imitates a coin of Termessos in Pisidia, and obverses with a head of Mercury are paired with these reverses in both groups (**O27** and **O28**).

G

FIGURE 7: Prototype of Set 4: Termessos.

[38] For the date: FREY-KUPPER 2007, p. 203-204 and catalogue p. 193, no. 205.

Pisidia, Termessos

70 BC

Obv. Laureate head of Zeus right.

Rev. Free horse galloping left; **TEP** below, **B** behind

G. Æ 15 mm ➞ 2.79 g *SNG Cop.* 32, nos. 291-299; Paris Fd. général 854 = Waddington 3985 (this coin)

The Termessan prototype is dated on the reverse, with **A** being the year of the recognition of the town's autonomy, by the *Lex Antonia di Termessibus*, of 71 BC. Once again, the type is reversed by clumsy copying.

Most reverse dies imitate Roman *quadrantes* — though, apart from **R37**, these are anepigraphic — as does **O29**. There are three styles: **R40**[39] has an irregular border of large dots, as in some dies in Sets 1 and 2; **R43-R46**[40] are all of a weak, 'scratchy' style; I will follow the rounded, raised style of **R39** into Set 5.

R42, in Group 12, appears to carry the 'man with a shovel' that is one of the diagnostic types of what I have called the 'Italo-Baetican series'[41]. These series are characterised by a set of unusual types, used on two separate assemblages, in Central Italy and in Spain. *Fig. 8* shows examples of 'the man with the shovel' from the Central Italian Assemblage. At present, I think it more likely that the type in Set 2 has been copied causally from an Italo-Baetican coin, rather than that Set 2 forms part of the central Italian assemblage.

The 'the man with a shovel' was in use into the 80s BC, as *fig. 8*, **I**, shows, a date that conforms well with the date of the Termessan prototype, **H**, though the coins may well have been struck later.

FIGURE 8: The man-with-a-shovel in the Central Italian Assemblage of the Italo-Baetican series.

[39] This is CRAWFORD 1982, p. 162, no. 114 = AILLY, pl. lxv, 2.

[40] Three of these reverses, from Ailly's illustrations, are grouped together as CRAWFORD 1982, p. 148, no. 37 = AILLY 1303; AILLY 1294; AILLY 1295.

[41] STANNARD 1995, and 2005b, p. 47-61.

Obv. Bust of Hercules from behind, with head turned left, and a club on his right shoulder; border of dots[42].

Rev. Man striding left with a 'shovel' on his shoulder; **C·AVE** to left.

H. Æ 21 mm ↙ 6.77 g Madrid = *Stannard 1995,* no. 14.

Struck over an *as, RRC* 339/1 of 91 BC.

Obv Forepart of lion right.

Rev. Same as last, but also carryin an *askos*; no legend.

I. Æ 28 mm ↖ 11.29 g Paris Ailly 977 (this coin).

In Groups 13 and 14, the style of **O30** and **O31** is very close to that of **O29** in Group 4, and **O31** uses the same, unusual, chevron-shaped quadrantal mark, ⁘, as **O29**, confirming that all these dies belong together. I think it possible that **O30** is a crude recutting of **O29**. **O31a** appears to have been recut as **O31b**, after the die deteriorated. The legend on these dies is garbled, but may just possibly derive from **ROMA**.

A further 'scratchy' prow reverse (**R47**) links to a reverse with Hercules and his club (**R48**). I can suggest no prototype. **O31a** links **to R49**, with a rounded, raised style prow, like **R39**. **O31b** links to **R50**, with a horse's head right, and a curved branch to right. I can suggest no useful prototype. **R50** also links to **O32**, with a diademed and beardless male head right.

Sample	n	Mean	CV
Set 4			
Gr. 11	11	2.37 g	11.4%
Gr. 12	9	2.07 g	17.7%
Gr. 13	2	2.07 g	15.0%
Gr. 14	4	2.08 g	4.7%

TABLE 2: Metrology of Set 4.

Set 5: Groups 15 and 16

In Set 5, I have brought together Groups 15 and 16, on the basis of two further dies with the same rounded, raised style of prow (**R51** and **R53**). **R51** links to **O33**, with a head of Mercury; **O35**, with a radiate head right; and **O34**, with a female head right, which links further to yet another prow, with some object above (**R52**). **R53** links to **O36**, with a helmeted head right, which links to **R54**, with Victory crowning a trophy right, and remnants of a legend.

[42] The type is copied from the *quadrans*, *RRC* 296/4, CN·BLASIO, or the *denarius*, *RRC* 297/1, TI Q, both of 112-111 BC.

Groups 15 and 16 could be extended to other possible types, but I have kept to those I feel confident about, and where there are die-link chains. While the rounded, raised style of prows suggests they may be linked, it is possible that they are not. The style of Groups 15 and 16 is more graceful than that of Groups 13 and 14. The weights of Set 5 concord quite well with those of Set 4.

Sample	n	Mean	CV
	Set 4		
Gr. 15	4	2.19 g	15.4%
Gr. 16	6	2.26 g	20.8%

TABLE 3: Metrology of Set 5.

Conclusions

What have we learned from this die-study?

Pseudo-mint A

In Set 1, the three surest prototypes are the Panormitan warrior, the warrior with spear, and the Paestan clasped hands, and — depending on whether Group 9 is part of the same pseudo-mint — there are other possible prototypes as well. I feel that the old name, 'Pseudo-Panormos/Paestum', is inadequate, and shall now refer to 'Pseudo-Mint A'.

Pseudo-mint A struck at least Groups 1-8, and, on balance, probably Group 9 as well. A large number of dies were used, in many die-pairs (*tab. 4*). The pattern of die-use is of individual obverse dies linked to a number of reverse dies, as well as individual reverse dies linked to a number of obverse dies. This suggests that obverses were not fixed in the anvil, but mounted from time to time from a die-box, and paired with the reverses available at

	Coins	Obv. dies		Rev. dies		Die-pairs	
Sample	n	d	d_1	d	d_1	d	d_1
Gr. 1-8	148	18	2	26	5	35	10
Gr. 9	33	5	1	6	2	11	6
Gr. 1-9	**181**	**23**	**3**	**32**	7	**46**	**16**

TABLE 4: Pseudo-mint A, dies and die-pairs[43].

[43] **d** = the number of dies or die-pairs; $\mathbf{d_1}$ = the number of dies or die-pairs of which there is a single occurrence in the sample.

that time. The fact that the pseudo-mint's production breaks into distinct, die-linked groups suggests that use of dies was sequential, as they wore out, and that that striking continued for some time, because, if all dies were available throughout the production period, or for long periods of time, even more frequent die-linking would probably have occurred.

The number of dies known has increased considerably, since my first study of this material in 1995, when I identified 15 obverse, and 20 reverse dies, in a sample of 62 coins[44]. However, at that stage, I did not know the pseudo-Paestan types, nor the coins of Group 9, except for **O19**/**R27**, which shares the warrior with spear reverse: if we remove the types then unknown from consideration, I have since 1995 discovered three new obverse dies (**O3**, **O14** and **O17**), and three new reverse dies (**R8**, **R12** and **R15**).

Using Warren Esty's most recent proposed formulae for estimating the coverage of the original number of dies from a sample of coins, we obtain the estimates in *tab. 5*. My sample has been gathered from many sources: museums, private collections, trade, and above all material in my Liri database, assembled over years. I see no selection bias that compromises the randomness of the sample. It should be recalled that die statistics of this type do not effectively model dies that broke almost immediately, or an arbitrary rate of usage of individual dies, but the evidence of wear and recutting[45] suggests that these dies were heavily used. With these caveats, the estimates in *tab. 5* suggest that I have already discovered most of the dies used by Pseudo-Mint A, unless there are further wholly unrelated types, as yet not recognized as belonging to the pseudo-mint.

	Obv.	Rev.	Die-pairs
Number[46]	26	41	68
Coverage[47]	98%	96%	91%

TABLE 5: Pseudo-mint A, estimated coverage of the original number of dies and die-pairs.

If we assume, purely hypothetically, that between 15,000 and 30,000 coins were struck from each obverse die already documented, 390,000 to 780,000

[44] STANNARD 1995.

[45] **O15**, **O18**, and probably **O19**.

[46] $e_{1c} = \frac{n(d + d_1)}{n - d_1}$ (ESTY 2011, p. 50, formula 5).

[47] $c_{est} = 1 - \frac{d_1}{n} = \frac{\textit{The number of coins struck by dies in the sample}}{\textit{The number of coins struck by all the dies}}$ (ESTY 2011, p. 49, formula 2).

coins would have been made, using some 1,217 to 2,435 kg of metal[48]. The survival rate of these pieces can then be calculated at 0.04%-0.02%, which is reasonable[49]. Even if we assume lower rates of die-usage, a large number of coins must have been struck. Although their total value was not very great — assuming a value of a *semis*, 390,000 coins would equal 12,187 *denarii* — their speed of circulation was much higher than that of precious metal coins, so that they played an important role in greasing the wheels of the everyday economy.

Such a large number of coins cannot have been forgeries, and the concept of 'forgery' implies:

> 'that it was formally forbidden to make them, that people had to be tricked into accepting them, and that their makers would be punished as criminals. There is no such evidence, and one needs to be careful to not simply extrapolate backward from medieval or modern concepts. Moreover, many of the types were clearly recognizable as not being of the cities they purported to copy... Consider, moreover, how the coins were put into circulation: the numbers were so large — and their individual value so low — that the clandestine passing of a piece or small number of pieces at a time into the monetary stock would not have sufficed to get them off the minter's hands or make an acceptable profit[50].'

It is most probable that they were put into circulation by money-changers, who probably paid some *agio* to the local authorities, an important function in an economy where the tax base was small.

If Group 9 is in fact part of Pseudo-Mint A, then at least one type imitated Rome (**R30**), but it is notable that Pseudo-mint A did not in the main imitate Rome, though I am sceptical that any form of interdiction or repression by Roman authorities was the reason[51]. It is more likely that

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[48] FAUCHER 2011 reviews the evidence for the number of coins from a die in Greek mints, and concludes, as 'une tentative où la précision des chiffres ne devra pas faire illusion', that an average die probably struck between 15,000 and 30,000 coins, p. 124-125. The weight per coin used in this calculation is 3.12 g.

[49] FAUCHER 2011, p. 125, estimates the survival rate of ancient coins at 1:6400.

[50] STANNARD – FREY-KUPPER 2008, p. 382.

[51] I can see no evidence for the thesis that Rome was threatened by counterfeits of its bronze coinage flooding in from its wider sphere of control, as articulated in BRANSBOURG 2011: 'Rome ... had to deal with [an] issue that limited its potential willingness to pursue fiduciarity: the area of acceptance of its bronze coins became wider and wider. In these circumstances, counterfeiting of its bronze coinage could only become a profitable activity, not only because of the much deeper circulation pool, but because the multiplicity of the mints and the diversity of the areas of circulation made it a lot more difficult to trace,

many non-Roman types were present in the monetary pool at this period, particularly outside the metropolitan area, so that that the prototypes were readily available. Suzanne and I have proposed that a dearth of small change in central Italy in the late 2nd and 1st c. BC led to a wide variety of coin being pressed into service. We base this on a number of things: the relatively small volume of Roman Republican bronze at Pompeii[52]; the importation into Italy and use of large blocks of foreign coins (of Ebusus to Pompeii[53], and of Kos, probably to Rome[54]); the huge variety of imitative and informal coinages; and the enormous numbers of foreign coins found in central Italy[55]. The situation continued well into the 1st c. BC, until Augustus' reform of the coinage.

This is probably also the explanation for the fact that Pseudo-mint A mixed imitations of relatively old coinages (the Panormitan prototypes **A** and **B**, of c. 130/120-90 BC) and later coins (the Paestan prototypes **C** and **D**, of the 90s to the 40s BC)[56]. The dating of Pseudo-mint A cannot therefore be based on the earliest prototypes, even for the beginning of its issues. As Suzanne and I said:

> 'In dating Pseudo-Panormos/Paestum, we need to take a number of factors into account: the dates of the two prototypes and the imitations' probable period of production. The Panormitan prototype, as we have seen, dates to c. 130/120 – 90 BC. In Sicily, by the middle of the first century BC, it was being replaced, as a major constituent of the circulating *aes* , by numerous later issues. Allowing for a time lag for the coins to travel from Panormos to central Italy, the copying

detect and control such activities. Although it is sometimes difficult to distinguish between official provincial, unofficial tolerated, and counterfeit series, there is no doubt that from the second century BC onward Roman silver and bronze coinages became the target of very active counterfeiters' (p. 104-105). Nor do I see evidence that Rome actively 'imposed its own domestic monetary standards on its Italian dominions and allies' (p. 100). I feel that the concepts of 'counterfeit' and 'imitation', in the following passage, are confused, and the idea that an 'approved authority' — presumably Roman — had formally to approve imitative issues is unrealistic: 'the nuance between an accepted imitation, produced by some approved authority outside of Rome in order to compensate for the lack of official Roman supply, and a mere counterfeit "privately" issued, may prove illusory during certain specific periods' (p. 108).

[52] STANNARD forthcoming.

[53] STANNARD forthcoming; STANNARD – FREY-KUPPER forthcoming.

[54] STANNARD – FREY-KUPPER 2008, p. 381-391, *Appendix 1*; FREY-KUPPER 1995.

[55] STANNARD – FREY-KUPPER 2008, p. 391-397, *Appendix* 2; FREY-KUPPER 1995.

[56] The evidence of the prototypes for the Pompeian Pseudo-mint shows that coins struck a century or more earlier were imitated: STANNARD forthcoming, section 'The Monetary Stock at Pompeii in the 3rd to 1st Centuries BC'; STANNARD – PARDINI 2011.

> could have begun a decade or more after the issue ended in Sicily. The Paestan model, however, would appear to be copying Roman types (clasped hands), which Crawford dates to 48 BC and to 42 BC. The period we need to bridge in thinking through the dates of the imitations, even if we assume that Pseudo-Panormos closely followed the date of the prototype, need be no more than two or three decades. For the moment, it seems best to assume that the whole issue was made in the 40s BC, but this is crucially dependent on the dating of the Paestan model[57].'

However, I now wonder if the dating of the Paestum prototype should be delinked from the use of the clasped hands type in Roman coins[58], and moved backwards, perhaps by a few decades.

Where was the Pseudo-mint based? The specimens in museums throughout Europe mostly came back from central Italy with travellers on the *Grand Tour* in the 18th and 19th c. and offer no useful evidence. Of the 181 coins in our sample, 59 are part of my database of coins that can be provenanced to the River Liri at Minturnae, and I am sure that a number of the pieces in trade will also have come from there. While this may suggest that the mint was at Minturnae, or at least in southern Latium, allowance has to be made for the sheer number and wide range of coins that were taken from the Liri in the late 20th c.[59]. It may simply be that the volume of coins from the Liri biases the sample. However, Minturnae, or southern Latium, is still the most probable mint location.

Find-spot	Coins	*Appendix 1*
Monte Li Santi-Le Rote, Narce	2	160, 162
Just north of Rome	2	70, 145
Rome	5	43, 50, 126, 134, 164
Ostia	1	37
Paestum	5	
Sullusto Collection		115, 116, 147
Other		113, 148
Pompeii	4	120, 121, 177, 178
Gargano (?)	1	34
Morgantina	2	11, 108

TABLE 6: Pseudo-mint A, find spots, other than Minturnae.

[57] STANNARD –FREY-KUPPER 2008, 2.88 p. 369-370.

[58] Most of the coins cited as models have a *caduceus* behind the hands, which the Paestan type does not. The *aurei* (*RRC*, p. 504, no. 494/10-12), however, do not.

[59] Cf. STANNARD – FREY-KUPPER 2008, p. 393-397, tab. 8.

Coins from known find-spots, other than Minturnae, are listed in *tab. 6*, and shown graphically in *fig. 9*. This wide distribution does not tell us anything about where the coins were struck, but shows how wide the circulation area of small coin in Italy and Sicily at the end of the 1st c. BC was, and that these imitative issues did not circulate only outside Rome, but also in Rome itself. By the 1st c. BC, the economy of Italy was becoming increasingly unified and increasingly monetised, and only Paestum and Velia on the mainland were still striking local issues. Coins would have flowed up and down Italy, including Paestan prototypes **A** and **B**, among new coins, and Panormos and other Sicilian issues, among older coin.

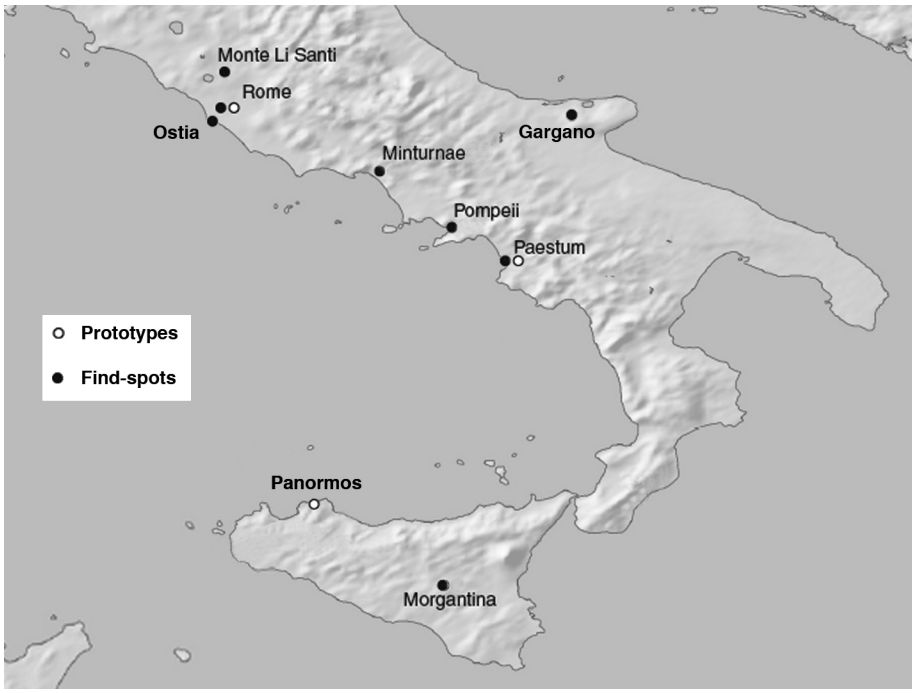


FIGURE 9: Pseudo-mint A, prototypes and find spots.

Of particular interest are the five coins from Paestum itself, all of imitative Paestan types. In addition to the three from Sallusto's collection[60] (nos. 115, 116, 147), we have identified one in the Medagliere del Museo di Paestum

[60] Sallusto's collection was formed in Paestum, largely from local finds, but specialist collectors attract dealers to bring coins of the types they collect from elsewhere, so we cannot be absolutely sure of the provenance of these pieces.

(no. 148), without provenance, and another from excavations (no. 113)[61]. We need therefore to evaluate the possibility that the Pseudo-mint A was based at Paestum itself. In this context, it should be noted that no coins with Panormitan types are reported from Paestum, which would be likely if the pseudo-mint were located there, because we cannot simply isolate the Paestan types from its overall, die-linked production, in which Panormitan types predominated. Moreover, our survey of 139 specimens of prototype **D**[62] did not find a single use of either of the two reverse dies in Pseudo-mint A with well-formed legends (**R21** and **R23**). On balance, the presence of the coins of Pseudo-mint A — including those with Paestan types — in other central and southern Italian sites suggests that these coins came in from elsewhere, and were assimilated into the Paestan monetary pool.

Like the Paestan prototypes, many of the coins of Set 1 carry the value-mark of a *semis*, **S.** These include reverse dies with the Panormitan warrior and the SONAL legend (**R2**-**R5**, **R7**-**R11** and **R28**), the warrior with spear and the SONAL legend (**R19**), and even on the warrior with spear with Greek legend (**R6** and **R13**), as well as obverses imitating Paestum (**O14, O17** and **O18**).

The problem of Group 9 — with two dies carrying the quadrantal value-mark, ⁝ (**R30** and **R31**) — remains. If this is not simply the result of casual carrying over of a value-mark from the prototype[63] (a Roman *quadrans*, and the possible Aitnaian Prototype **E**, which may also be the origin of the man with spear), it could mean that Group 5 should be dissociated from the other coins of Pseudo-mint A, and perhaps given an earlier date. But, against this argument, is the **S** on **R28**, which suggests casual copying. Given that so many small Æ coins of similar size, many without value marks, were in circulation, it seems likely that that were all treated equally, simply as Æ *nummi*.

Pseudo-mint B

The six coins in Set 3 (Group 10) probably do not form part of Pseudo-mint A, and I shall accordingly call them Pseudo-mint B. Their modules are very similar, and the mean weights are slightly lighter, 2.47 g (three

[61] From trench 42 in the Caesareum; 'Ben undici monete di bronzo (nn. 200-210) databili tra III e I secolo a.C. sono state rinvenute ... nell'US 27, al di sotto di un blocco di pietra in posizione di caduta', GRECO – THEODORESCU 1987, p. 85.

[62] Crawford 1973, p. 93, no. 32 var.

[63] The issues of the Pompeian Pseudo-mint include a small bronze coin with an obverse imitating a sixty-*as* Roman gold coin (*RRC*, p. 154, no. 44/2, 211-208 BC, complete with value-mark (STANNARD forthcoming, TC-22).

weighed coins only) against 2.88 g, but still compatible. They, however, do not share any type with another group. Four of the coins have a Liri provenance, and, with the same caveats as before, southern Latium seems the most likely area for their production. There are no firm indications of date, though both the Menaian prototype **F**, and the Republican issue with the legend, Ⱥ (*RRC* 192/2-4), date to the first half of the 2nd c. BC. (I doubt, though, that this last coin was the prototype.) The Hercules heads on the obverses, however, are more likely to derive from coins of the late 2nd or early 1st c. BC.

Pseudo-mint C

The 26 coins of Set 4 — which I shall now call Pseudo-mint C — are much more concerned with imitating Roman *quadrantes*, though other types are still used, with the Termessan prototype **E** providing an upper limit date of 70 BC. Sixteen of 26 coins come from the Liri, and this large preponderance strongly suggests that they were struck there or nearby.

With its flans smaller than in Sets 1 to 3, its greater concentration on Roman types, and its lower mean weight (2.20 g), I am inclined to date Pseudo-mint C late, perhaps to the 40s BC, and it is this that has made me suggest, in discussing Pseudo-mint A, that the Paestan prototypes **A** and **B**, and consequently Pseudo-mints A and B, should be dated earlier. It is, of course, possible that the various pseudo-mints were in operation contemporaneously, whether or not they were in the same place.

Pseudo-mint D

Pseudo-mint D is a miscellaneous and partial assemblage around the rounded, raised style of prow. This stylistic factor may perhaps suggest a link to Pseudo-mint C. Nine of the twelve coins come from the Liri.

The historical importance of the imitative issues

An important and inescapable conclusion is that it is wrong to look separately at one set of imitative types within complexes that mule prototypes from different issuing-authorities. For example, to look only at imitations of Roman coins within the mixed issues of the pseudo-mints discussed here denatures the phenomenon, and makes it impossible to draw out the rich information that these unprepossessing coins provide about the monetary history and the economy of Italy in the late 2nd and 1st c. BC. The diversity in the types used by the pseudo-mints almost certainly mirrors the diversity of coins in the hands of the communities that used them. Not to see the

whole range of imitative types together, and to isolate the coins imitating one of a number of prototype mints, is to look at a sliver of a broken mirror.

It is not simple to bring together again the pieces of the broken mirrors, and too easy to dismiss these crude productions as uninteresting and uninformative, but the need for them testifies to the growing demand for small change in an increasingly monetised day-to-day economy, the emptying into each other of the circulation areas of an earlier Italy, and the flood into Italy of foreign coins, as an epiphenomenon of war and trade.

It is also wrong to see the products of the pseudo-mints as repressed by the Romans, or as illegal counterfeits, and it is reaching beyond the evidence to suggest that they constituted a threat to the stability of the Roman currency itself, or that they were the subject of any particular interest by Roman authorities.

We suggest adopting the names we have used here, at least for the moment, for the various pseudo-mints.

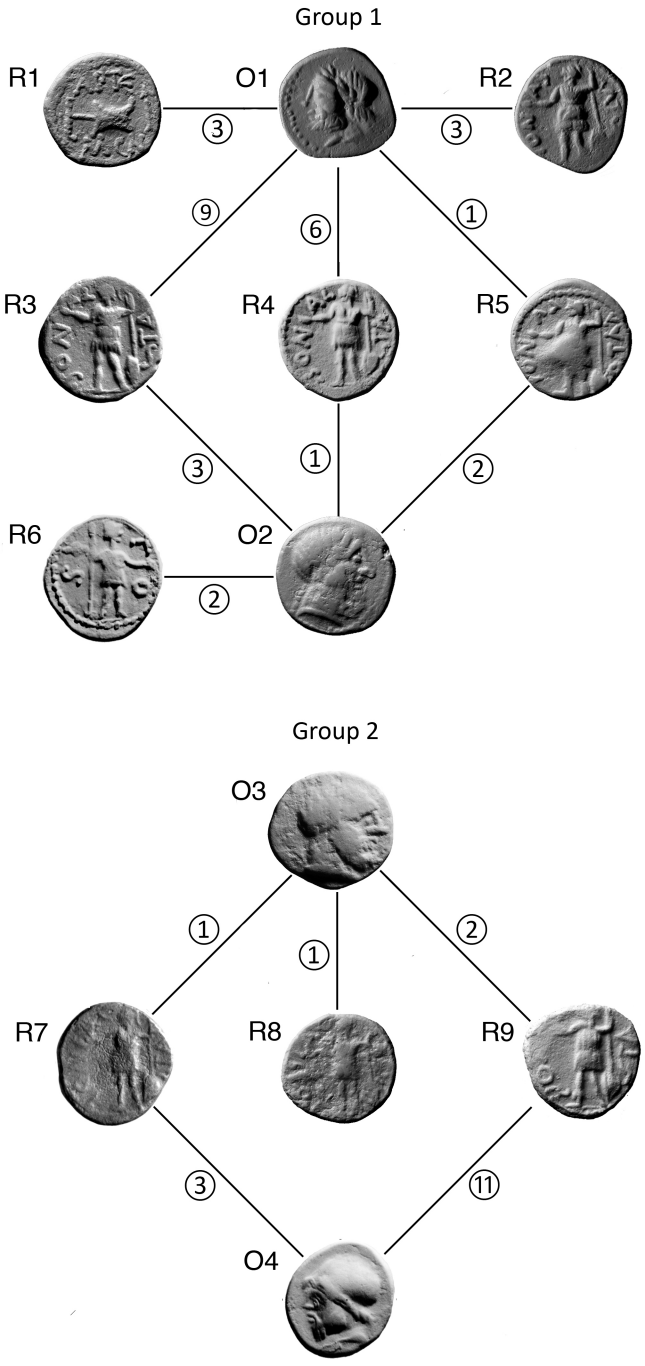
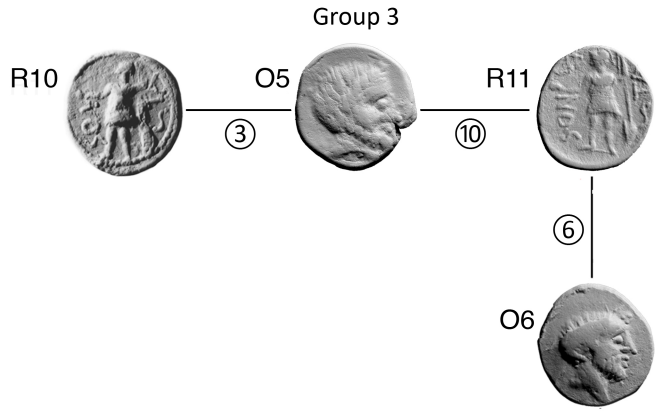


Plate 1



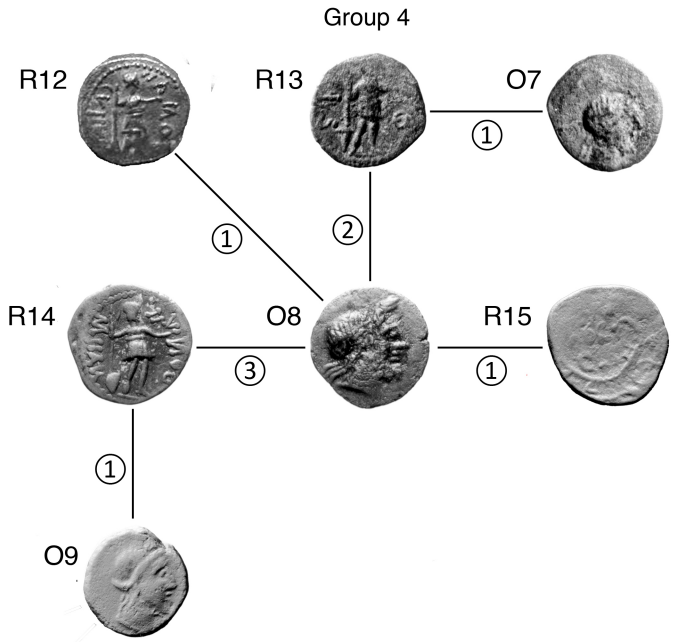


Plate 2

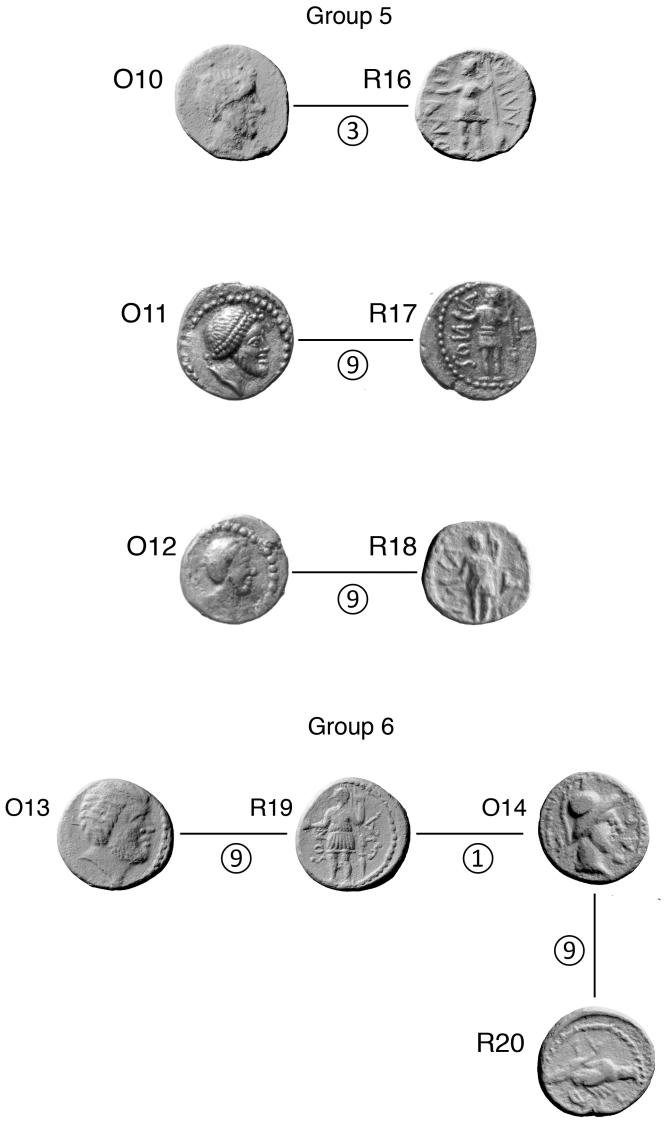


PLATE 3

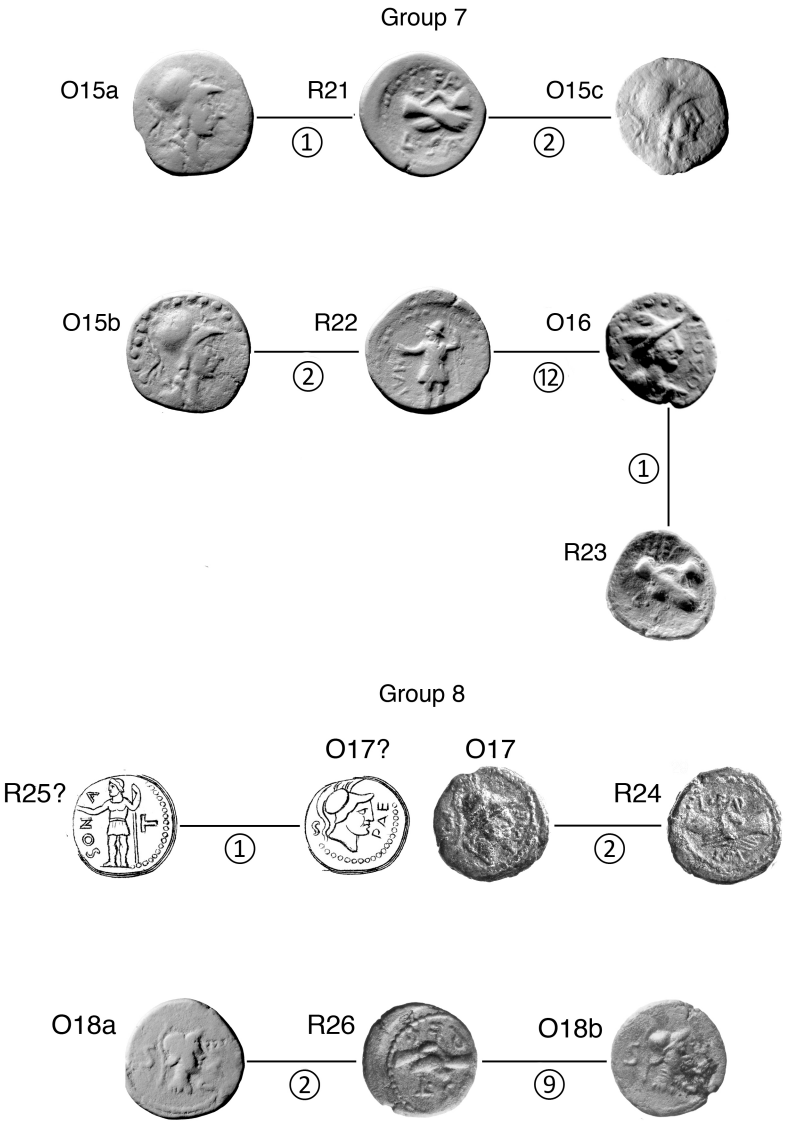


PLATE 4

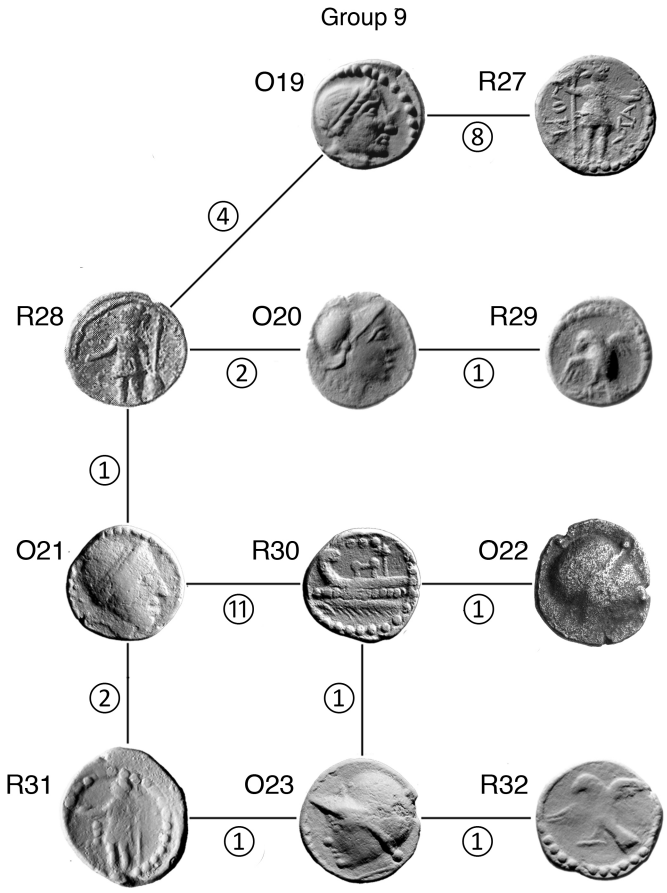


PLATE 5

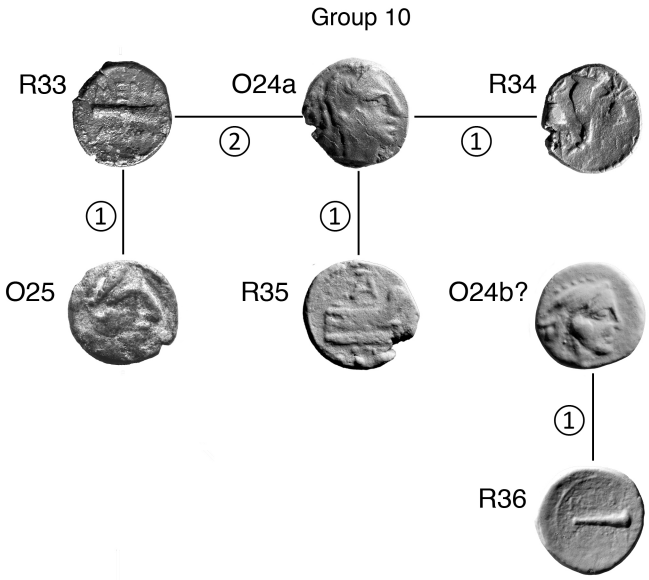


Plate 6

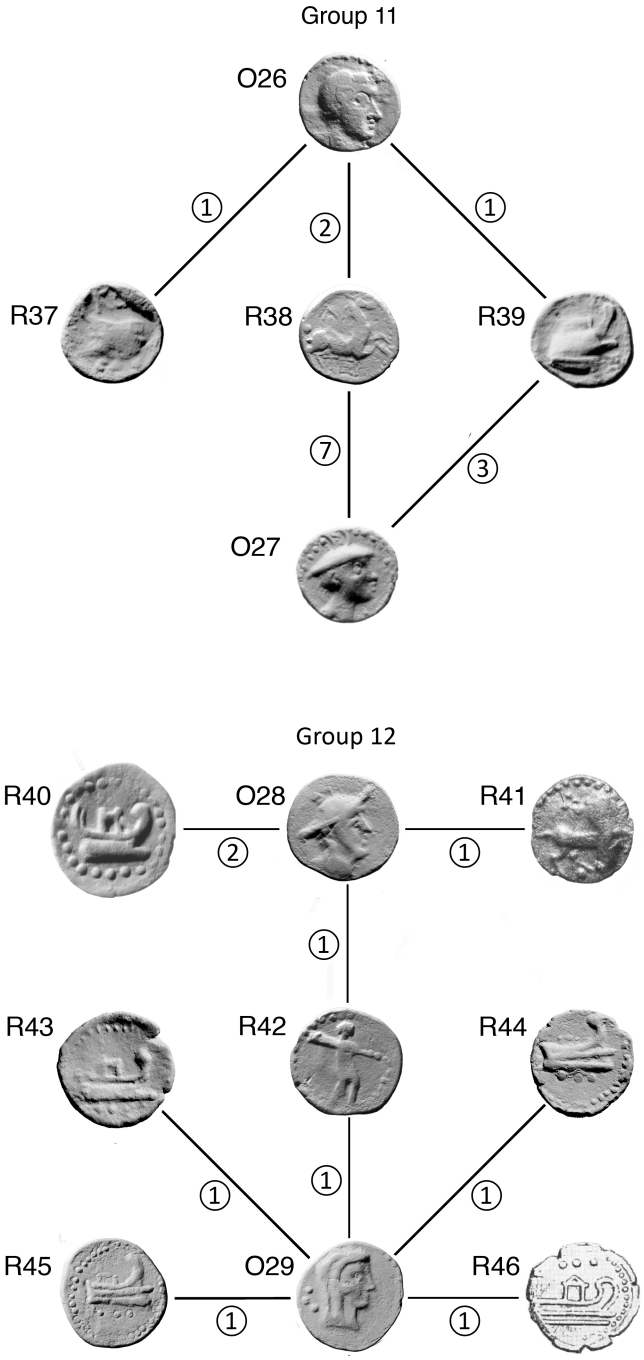


Plate 7

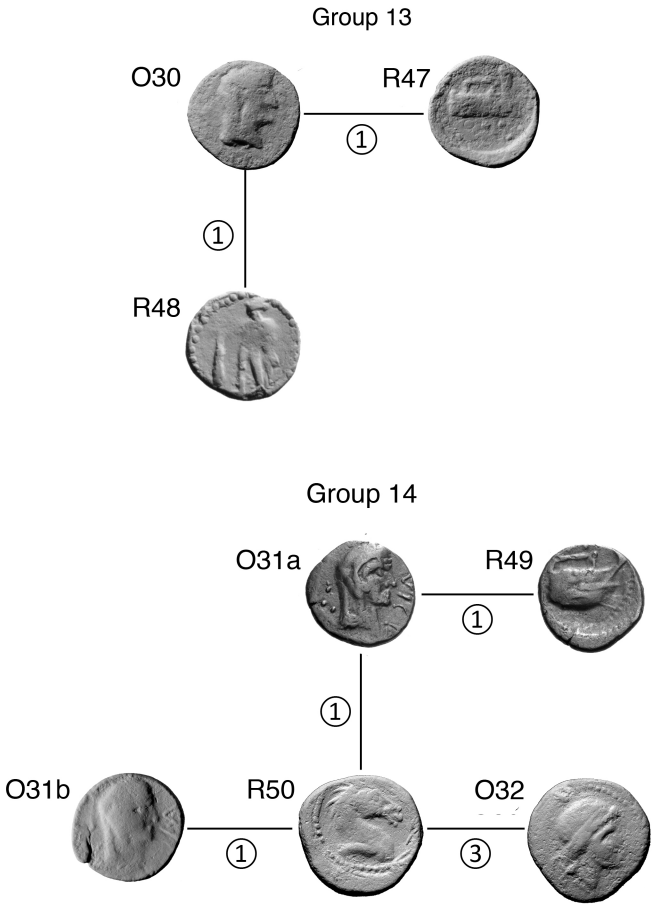
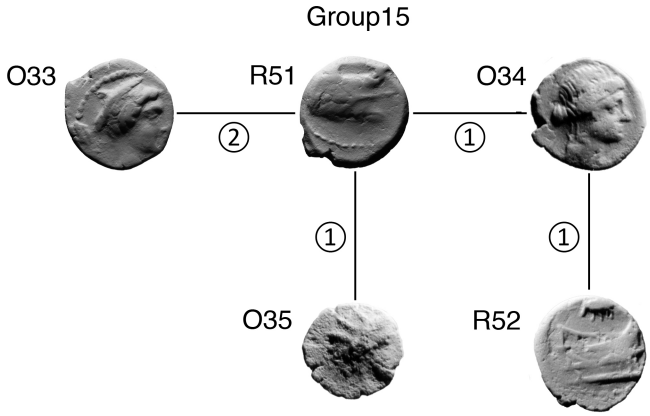


Plate 8



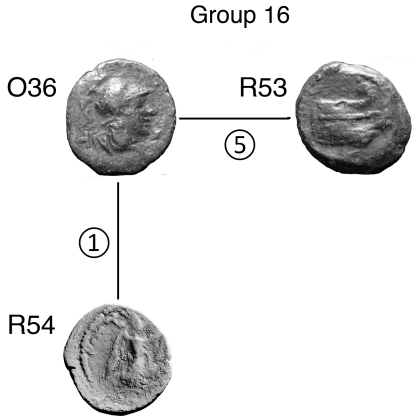


PLATE 9

Appendix 1
Catalogue of Coins Studied

No.	*Die illustrated*	*mm*	*gr.*	*Coin*
				SET 1
				GROUP 1
				O1 / R1
1	**R1**	16	2.74	Copenhagen, uncertain
2		17	3.65	Copenhagen, uncertain
3		16	3.54	Vienna, unattributed 14815
				O1 / R2
4	**O1**, **R2**	16	2.69	Liri[64] 8.001
5		16	3.51	Paris, Panormus 989
6		16	3.38	From Triton XV, lot 1335
				O1 / R3
7		18	3.25	Liri 4.117
8	**R3**	17	4.42	British Museum
9		18	3.93	British Museum
10		17	3.96	Göttigen, CR 61-4
11		16	4.03	BUTTREY – ERIM – GROVES – HOLLOWAY 1989, p. 94, no. 264
12		17	2.70	Madrid
13		16		Trade
14		18	4.29	*SNG Cop*. 4, pl. 12, no. 537
15		16	2.16	Liri 14.154
				O1 / R4
16		15		Trade
17		16	3.37	*SNG Cop*. 4, pl. 12, no. 539
18		18	3.51	Vienna 6682
19		16	3.85	Liri 100.033
20		17	3.60	*SNG Cop*. 4, pl. 12, no. 538
21		16	2.96	Liri 14.153

[64] Liri references are to my database of coins that may be provenanced from the River Liri, at Minturnae.

No.	*Die illustrated*	*mm*	*gr.*	*Coin*
				O1 / R5
22		15	2.92	Liri 28.028
				O2 / R3
23		16	3.07	Liri 45.017
24		17	2.73	Liri 53.018
25		16	2.46	Vienna 6687
				O2 / R4
26	**R4**	16		eBay, Nummus et Ars, 22 March 2011
				O2 / R5
27	**O4**, **R5**	16	4.08	Liri 45.018
28		19	5.37	Madrid
				O2 / R6
29	**R6**	17	2.77	Liri 13.068
30		16	2.87	*SNG* Cop. 4, pl. 12, no. 534
				GROUP 2
				O3 / R7
31	**O3**	17	3.46	Vienna 6686
				O3 / R8
32	**R8**	16	2.50	*TODI*, no. M39, inv. 2346
				O3 / R9
33		15	2.86	HOLLARD – BERNARD 2004, as unpublished Celtic
34		15	3.01	Trade, said to have been found in the Gargano
				O4 / R7
35		16	3.30	Liri 14.156
36	**R7**	16	3.46	Liri 5.124
37		17	3.31	SPAGNOLI 2007, p. 316 and p. 261, fig. 3, no. 15, from Ostia
				O4 / R9
38		16	2.88	Liri 13.070
39	**R9**	16	3.48	Liri 100.323
40		16	3.31	Liri 27.103
41		15		Trade
42		17	3.53	Liri 100.225
43		16	3.14	FREY-KUPPER 1995, p. 33-73, no. 18
44		15		Winterthur casts, Ready
45		17	2.70	Liri 46.016

No.	*Die illustrated*	*mm*	*gr.*	*Coin*
46		16	2.89	Private collection
47		15	2.93	*SNG Milano* I, p. 108, no. 156 (Monete Gallo-romane non-attribuite)
48		15	3.02	*SNG Milano* I, p. 108, no. 157 (Monete Gallo-romane non-attribuite)
				GROUP 3
				O5 / R10
49	**R10**	17	3.07	Berlin, Prokesh-Osten
50		15	3.48	FREY-KUPPER 1995, p. 33-73, no. 17
51		16	3.96	*SNG Milano* I, p. 108, no. 154 (Monete Gallo-romane non-attribuite)
				O5 / R11
52		16	3.18	Private collection
53		16	3.10	Trade
54		14	2.74	Liri 53.019
55		16	3.24	Liri 32.076
56		15	2.51	Liri 43.011
57		15	3.25	Berlin, Friedlander
58		16	2.93	Liri 5.123
59	**O5**	16	4.20	Liri 32.077
60		15	3.34	*SNG Milano* I, p. 108, no. 152 (Monete Gallo-romane non-attribuite)
61		15	2.61	*SNG Milano* I, p. 108, no. 153 (Monete Gallo-romane non-attribuite)
				O6 / R11
62	**O6**	16		Liri 32.071
63		17	3.52	Trade
64		17	2.68	*SNG Cop.* 4, pl. 12, no. 535
65		15	3.03	Liri 4.120
66	**R11**	16	2.44	Liri 32.079
67		16	3.05	*SNG Milano* I, p. 108, no. 158 (Monete Gallo-romane non-attribuite)
				GROUP 4
				O8 / R12
68		15	2.59	www.OldRomanCoins.com, October 1999
				O8 / R13
69		16	2.47	Liri 4.119
70		17	1.99	Private collection, said to have been found north of Rome

No.	*Die illustrated*	*mm*	*gr.*	*Coin*
				O7 / R13
71	**O7, R13**	15	2.00	Liri 14.264
				O8 / R14
72	**O8, R14**	17	2.21	Liri 4.118
73		17	2.54	Private collection
74		15	2.87	Liri 53.020
				O8 / R15
75	**R15**	12	2.71	Liri 37.011
				O9 / R14
76	**O9**	15	2.73	Berlin, IB
				GROUP 5
				O10 / R16
77		16	3.92	Liri 14.155
78	**O10, R16**	16	3.54	Rome, Museo delle Terme 1739
79		15	2.35	Liri 27.049
				O11 / R 17
80	**O11, R17**	16	2.76	Liri 4.113
81		16	3.03	British Museum
82		16	3.21	MACDONALD 1905, p. 736, no. 49
83		15		Liri 32.072
84		15	3.00	*SNG Cop*. 4, pl. 12, no. 542
85		15	3.38	Liri 32.080
86		15	3.05	VISMARA 1998, no. 54, Liri 35.034
87		14	3.47	Nummorum Auctiones 6, 883
88		16	4.23	*SNG Milano* I, p. 108, no. 155 (Monete Gallo-romane non-attribuite)
				O12 / R18
89		16	3.52	British Museum, SP 2873 2/10
90	**R18**	15	3.25	British Museum
91		16	4.66	British Museum
92		14	2.23	Liri 11.022
93		17	2.68	Berlin, v. Rauch
94	**O12**	15	2.71	Liri 4.110
95		16	2.75	*SNG Milano* I, p. 108, no. 159 (Monete Gallo-romane non-attribuite)
96		16	3.02	*SNG Milano* I, p. 108, no. 160 (Monete Gallo-romane non-attribuite)
97		16	4.10	*SNG Milano* I, p. 108, no. 161 (Monete Gallo-romane non-attribuite)

No.	*Die illustrated*	*mm*	*gr.*	*Coin*
				GROUP 6
				O13 / R19
98	**R13**, **R19**	16	3.03	Liri 13.069
99		15	3.58	British Museum
100		17	3.86	British Museum
101		17	4.30	British Museum
102		16	2.97	Berlin, v. Rauch
103		17	3.86	British Museum
104		17	3.27	British Museum
105		16		Winterthur casts, den Haag
106		16	2.53	Liri 5.122
				O14 / R19
107		17	3.77	*SNG* Cop. 3, 1378
				O14 / R20
108		16	3.22	BUTTREY – ERIM – GROVES – HOLLOWAY 1989, p. 72, no. 26
109		16	3.80	Vienna 4516
110		16	3.07	Liri 45.016
111		16	3.61	Liri 29.074
112		16	4.34	VAuctions 290, no. 66 = Ancient Coin Imports 19 November 2012
113		15	3.62	GRECO – THEODORESCU, p. 177 no. 205
114		17	3.49	Liri 14.128
115	**O14**, **R20**	16	3.20	LIBERO MANGIERI 2006, p. 162, no. 910, inv. 51487
116		14	3.24	LIBERO MANGIERI 2006, p. 161, no. 908, inv. 51486
				GROUP 7
				O15a / R21
117	**O15a**, **R21**	16	3.49	Paris
				O15b / R22
118	**O15b**, **R22**	17		Liri 32.070
119		16	2.87	*SNG Milano* I, p. 110, no. 163 (Monete Gallo-romane non-attribuite)
				O15c / R21
120	**O15c**	18	3.12	AAPP excavations at Pompeii, #507,28,19
121		19	2.19	PARP:PS excavations at Pompeii, 2008, C18-12

No.	*Die illustrated*	*mm*	*gr.*	*Coin*
				O16 / R22
122	**O16**	17	2.54	Berlin, Löbbecke
123		16	3.46	Liri 11.019
124		12		Winterthur casts, Gotha
125		16	3.21	British Museum
126		16	2.68	FREY-KUPPER 1995, no. 10
127		17	3.37	Oxford
128		16	2.98	Liri 100.226
129		16	3.46	Liri 14.157
130		17	2.12	Liri 27.048
131		17		Liri 32.073
132		17		Liri 32.074
133		16	3.05	*SNG Milano* I, p. 110, no. 164 (Monete Gallo-romane non-attribuite)
				O16 / R23
134	**R23**	16	2.96	FREY-KUPPER 1995, p. 33-73, no. 9, but with the obverse printed again as the reverse on the plate
				GROUP 8
				O17? / R25?
135	**O17?, R25?**	16		SESTINI 1828, pl. addendum 1, no. 6
				O17 / R24
136		14	2.92	Van der Dussen auction 23 (6 April 1995), 893
137	**O17, R24**	16	3.89	*SNG ANS* 2, pl. 21, no. 791 = 1944.100.5244
				O18a / R26
138	**O18a**	16		Trade
139		15	3.67	*SNG Munich*, 3, pl. 39, no. 1128
				O18b / R26
140		16		Artemide Asta 17E, 12 July 2012, lot 1372
141		15	2.50	Vienna 4519
142		16	2.90	Paris, Delpierre Paestum 45; DM 1360-1
143		15	2.88	InAsta 41, lot 76
144		11	3.02	*SNG Cop*. 2, pl. 27, no. 1360
145		15	2.40	Private collection, said to have been found north of Rome
146	**O18b, R26**	15	2.87	Liri 4.091
147		17	2.07	LIBERO MANGIERI 2006, p. 163, no. 922, inv. 51493
148		17	2.87	Medagliere del Museo di Paestum, inv. 190554

No.	*Die illustrated*	*mm*	*gr.*	*Coin*
				SET 2
				GROUP 9
				O19 / R27
149	**O19**	16	2.94	Liri 13.071
150	**R27**	16	2.07	Liri 43.012
151		16	2.84	British Museum
152		18	2.50	Trade
153		18	4.28	*SNG Cop*. 3, pl. 12, no. 540
154		16	3.30	Berlin, Imhoof-Blumer
155		15	2.29	Trade
156		16	4.00	Nummorum Auctiones 6, 884
				O19 / R28
157		18	2.76	*SNG Cop*. 3, pl. 12, no. 541
158		18	2.80	Trade
159	**R28**	16	3.14	*SNG Milano* I, p. 110, no. 162 (Monete Gallo-romane non-attribuite)
160		15		*NARCE*, p. 60 no. 15, Inv. 3205 (as King Ballaios, Illyria, but possibly Lipari or Panormos)
				O20 / R28
161	**O20**	16		Trade
162		15	2.70	*NARCE,* p. 60, no. 16, Inv. 3135 (as Aetolian League (?))
				O20 / R29
163	**R29**	15	2.93	Trade
				O21 / R28
164		15	2.85	FREY-KUPPER 1995, no. 16
				O21 / R30
165	**O21**, **R30**	15	3.28	Berlin 28624/13
166		16	3.17	Paris uncertain
167		15	3.03	Liri 14.301
168		16		Private collection
169		16	2.35	Trade
170		15	2.91	Liri 45.009
171		16		Private collection
172		16	2.57	Trade
173		16	2.83	Copenhagen uncertain
174		17		Trade
175		15	2.73	Liri 37.003

No.	*Die illustrated*	*mm*	*gr.*	*Coin*
				O22 / R30
176	**O22**	17		Private collection
				O21 / R31
177		15	2.36	House of Amarantus, Pompeii, SFN 1568
178		17	2.61	Naples P 14184 bis
				O23 / R30
179	**O23**	17	3.40	Liri 42.059
				O23 / R31
180	**R31**	18		Winterthur casts, 1916 Philipson
				O23 / R32
181	**R32**	17	2.30	British Museum, SP plates 2872 5/1
				SET 3
				Group 10
				O24a / R33
182	**R33**	14		Liri 48.095
183		19	1.99	Liri 45.192
				O24a / R34
184	**R34**	21		Liri 46.038
				O25 / R33
185		15	2.87	*SNG Cop*. 4, pl. 8, no. 385
				O24a / R35
186	**O24a, R35**	15	2.55	Liri 37.010
				O24b? / R36
187	**O24b, R36**	17		*SNG Munich* 5, pl. 17, no. 621
				SET 4
				Group 11
				O26 / R37
188	**R37**	14	2.47	Liri 11.007
				O26 / R8
189	**O26, R38**	14	2.40	Liri 13.100
190		12	1.71	Trade
				O26 / R39
191	**R39**	14	2.20	Berlin, R v. L
				O27 / R38
192	**O27**	14	2.50	Liri 29.006
193		16	2.45	Liri 11.014

No.	*Die illustrated*	*mm*	*gr.*	*Coin*
194		15		Liri 32.065
195		16		Liri 32.056
196		14	2.31	Liri 13.101
197		12		Liri 32.066
198		16	2.32	Copenhagen uncertain
				O27 / R39
199		16	2.74	Trade
200		15	2.34	Berlin, Ross
201		17	2.66	Barcelona
				GROUP 12
				O28 / R40
202	**R40**	18	2.63	Paris Ailly 1050, 3
203		18	2.32	Trade
				O28 / R41
204	**R41**	14	1.95	Liri 4.031
				O28 / R42
205	**O28, R42**	15	1.87	Liri 13.007
				O29 / R42
206		17	1.88	Liri 100.196
				O29 / R43
207	**R43**	15	1.94	Liri 42.057
				O29 / R44
208	**R44**	14	2.47	Liri 48.069
				O29 / R45
209	**O29, R45**	15	2.13	Liri 23.008
				O29 / R46
210	**R46**	15	1.42	AILLY pl. LXII, no. 29
				GROUP 13
				O30 / R47
211	**O30, R47**	16	2.29	Trade
				O30 / R48
212	**R48**	16	1.85	Paris, Greek uncertain.
				GROUP 14
				O31a / R49
213	**O31a, R49**	14	1.97	Private collection
				O31a / R50
214	**O31a**	17		Winterthur casts

No.	*Die illustrated*	*mm*	*gr.*	*Coin*
				O31b / R50
215	**O31b**	15	2.02	Copenhagen uncertain
				O32 / R50
216	**O32, R50**	15	2.16	Liri 21.009
217		14	2.16	Liri 14.271
218		15		LINDGREN 1989, p. 29, no. 670
				SET 5
				GROUP 15
				O33 / R51
219	**O32, R50**	16		Liri 32.038
220		15	2.21	Liri 14.273
				O34 / R51
221	**R51**	16	2.45	Liri 14.064
				O34 / R52
222	**O34, R52**	15	2.40	Liri O20 / R28
				O35 / R51
223	**O35**	13	1.71	Liri 14.062
				GROUP 16
				O36 / R53
224		15	2.05	Liri 45.006
225		16	1.70	Liri 43.008
226		15	2.77	Liri 43.009
227	**O36, R53**	16	2.86	www.flickr.com/photos/ahala_rome/3538940534/
228		15	1.91	Liri 14.063
				O36 / R54
229	**R54**	15	2.26	Berlin, Dressel

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RIASSUNTO

La produzione monetale delle "pseudo-zecche" in Italia centrale tra secondo e primo secolo a.C. è stata discussa in Stannard – Frey-Kupper 2008. Ad una delle pseudo-zecche è dedicata la presente analisi dei coni. Si tratta della zecca denominata "pseudo-Panormus/Paestum" che coniava piccoli nominali enei riproducendo e abbinando una varietà di tipi monetali. Quattro diversi gruppi sono stati isolati e descritti, per il più grande dei quali (la "pseudo-zecca A") si conoscono 23 coni del dritto e 32 del rovescio. L'analisi della distribuzione dei rinvenimenti mostra il crescente bisogno e l'ampio areale di distribuzione del circolante minuto – che comprendeva anche queste emissioni "informali" – in Italia centrale nel primo secolo a.C.. In questo periodo, come noto, la zecca di Roma non conia per lungo tempo il bronzo. La varietà dei tipi imitati riflette il circolante che deve essere stato disponibile.