Pierluigi DEBERNARDI & Olivier LEGRAND *

ROMAN REPUBLICAN SILVER COINS OF THE QUADRIGATUS PERIOD STRUCK IN SPAIN

Abstract — The silver coinage of the Roman Republic at the beginning of the Second Punic War is represented by significant emissions of quadrigati and half-quadrigati for which different production sites have been considered until now, viz. Rome itself and auxiliary workshops in mainland Italy and Sicily. This article however proves beyond doubt that some quadrigati emissions of very specific types, together with several associated fractions, were produced in Spain. This finding is essentially based on the study of the places where these types were discovered or have appeared on the numismatic market, most often quite recently. After describing the different types and denominations, the study focusses on their metrology and ends with some historical considerations regarding the presumed dates and mints of these coins.

Many scholars have recognized the need for a die-study of the quadrigatus coinage, as the only means to make progress in understanding its complex nature and development. We share the same belief, have undertaken this huge task, and are now near the end. Images of over 3,000 quadrigati were collected and their dies studied. This study reveals how the different stylistic groups, as defined by die-links, are (un)related; together with the distribution of their appearance in hoards, this evidence also allows educated guesses about where the coins were minted.

Here, however, we would like to report on some small groups of quadrigati and related coins that are completely distinct and separate, and which we can demonstrate have a Spanish association. Two of them were listed in the classification of the quadrigati drawn up by Le Gentilhomme as LG IV-B1, B3 (actually two parts of the same series, as will be shown) and LG II-E. The legend ROMA is incuse or semi-incuse on the former, and in relief on the latter. In the left hand column of fig. 1 we illustrate, for the sake of clarity, the three specimens on which Le Gentilhomme based his catalogue entries, together with, on the right, three other varieties of coins discussed in this paper and which will also be shown to belong to Spain.

* @: pierluigi.home@fastwebnet.it – lgrd10@yahoo.com

[3] We thank Andrew Burnett for suggesting the separate publication of the Spanish series, for improving the English and for all his suggestions. Pere Pau Ripollès was very helpful in finding some of the pieces published here and in pointing out most of the references; we thank him for all his support.
[5] RRC classifies LG IV-B1 shown in Fig. 1 as 31/1 (plate IV-11, BnF 124-Ailly = REP-1572), LG IV-B3 as 28/3 (plate III-9, BnF 129-Ailly = REP-1577), while LG II-E is not within the relief types in RRC.

We present below a catalogue of all the pieces we have inventoried so far. In tables 1, 2 and 3 we give a running series number, and list the dies which have been identified and are illustrated in the plates. Each coin is given its reference number, and details of its weight, die-axis, size and specific mass (γ), when available. Tables 1 and 2 concern the two groups of *quadrigati*, while Table 3 includes three more enigmatic types: the fractional *RRC 28/5*, the newly-discovered drachms with an oath scene, [6] and an additional *quadrigatus* (all shown in the right hand column of fig. 1).

The reason for treating all these coinages together is that they all appear to have a Spanish origin, as can be quickly grasped by looking at their provenance: most of them come either from Spanish finds or from Spanish auctions and dealers (all those with a Spanish association are highlighted in bold in the tables). All the corresponding images are shown in the plates, which constitute the corpus of the Roman pre-*denarius* Spanish emissions known to date.

---

[6] This type, with a janiform head/oath-taking scene design, is not included in *RRC* because it was not yet known at the time of publication. It was first discovered and recognized as a unicum by Jesús Vico in a collection from Sevilla, and first published in García-Bellido 2000–2001, p. 551–577.
Coinage A: the incuse quadrigati (H11 and H12)

The first group we discuss is the one of the incuse (or semi-incuse) quadrigati, which are quite likely to be the first Roman coins struck in Spain. [7] The find spots of as many as five specimens are known: H11-4 [8] from the La Carència excavations, an archaeological site some 30 km inland to the west of Valencia; [9] H12-1 and H12-5 from the Tivissa tv hoard, from Castelet de Banyoles, inland between Tarragona and Ebro estuary; [10] and H12-4 and H12-6 from the site of La Palma in the Ebro estuary. [11] Another seven pieces are from Spanish sales or in Spanish collections, so in total 12 out of the 19 known coins are associated with Spain. In addition, no specimen of any of these types has ever been found outside Spain.

The design of these quadrigati differs from that of all the other known series. Two different engravers (identified hereafter as types H11 and H12) were probably involved:

• the obverse dies of H11 have a cruder style and can be recognized by the hair between the two laurel wreaths, which is rendered by a series of thin and wavy lines, without any clear division between the left and the right side. The hair between the wreaths and the forehead is rendered by thin lines. The nose is quite sharp on most of the dies, and the sideburns are small and just a continuation of the tiny dashes of the hair;

• the style of H12 is finer and closer to the standard design of the other non-Spanish series. The left and right parts of the hair are clearly divided in the middle; the hair is shown with clearly defined and separated locks, and the sideburns are small but well separated and distinct from the rest of the hair.

On the reverses, the letters of the legend ROMA are sometimes uneven and not carefully engraved and/or positioned. Victoria’s right arm, when visible, is always bent, as Le Gentilhomme correctly remarked. Both styles have in common a quadrige that is almost always shown at an angle to the observer; this makes the horses seem tilted, and their front hooves almost

---

[8] This is a preliminary classification scheme that later will be included in the new complete classification for the quadrigatus coinage; it is based on a first capital letter, designing a homogeneous group, a lowercase letter related to the type of legend (incuse, relief, tablet with ROMA in relief) and a consecutive number. Thus H1 stands for Hispania and incuse; Hr for Hispania and relief.
[11] Noguera 2012, p. 262-288; Noguera Guillén et al. 2013. We would like to thank D’Jaume Noguera Guillén very warmly for sharing all his data with us. In particular, H12-4 and H12-6 are published here for the first time, and so allow the discussion to be based on even more solid evidence. This site has proved to be the most important archaeological site for our research, since it is the source of no fewer than five of the coins discussed in this paper.
touch the legend tablet, which seems always to be trapezoidal. It has, however, to be noted that on Hi2 the horses are engraved in a better way; compare, e.g., the last legs on the left (and in general all the back legs) with those on Hi1, which are rendered by straight, rigid lines. Moreover, the front legs on Hi2 are engraved with a marked downward curvature, while on Hi1 they are more straight.

**Table 1 – Coinage A: quadrigati with incuse legend (Hi1 corresponds to LG IV-B1)**

<table>
<thead>
<tr>
<th>Cat.</th>
<th>Obv. die</th>
<th>Rev. die</th>
<th>Reference</th>
<th>W (g)</th>
<th>Axis</th>
<th>$\varnothing$ (mm)</th>
<th>$\gamma$ (g/cm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hi1-1</td>
<td>1</td>
<td>1</td>
<td>Aeternitas [12] (Vcoins, IX/2013)</td>
<td>6.00</td>
<td>✓</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Hi1-2</td>
<td>1</td>
<td>1</td>
<td>Hervera 85, 96</td>
<td>6.15</td>
<td>✓</td>
<td>19</td>
<td>9.30</td>
</tr>
<tr>
<td>Hi1-3</td>
<td>2</td>
<td>1</td>
<td>BnF 129-Ailly (REP-1577)</td>
<td>5.70</td>
<td>†</td>
<td>24</td>
<td>8.75</td>
</tr>
<tr>
<td>Hi1-4</td>
<td>2</td>
<td>2</td>
<td>La Carència (Museo de Valencia, inv. 31858)</td>
<td>5.52</td>
<td>→</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Hi1-5</td>
<td>3</td>
<td>3</td>
<td>BnF 124-Ailly (REP-1572)</td>
<td>6.67</td>
<td>\</td>
<td>20</td>
<td>9.65</td>
</tr>
<tr>
<td>Hi1-6</td>
<td>3</td>
<td>4</td>
<td>Tesorillo website [13]</td>
<td>6.27</td>
<td>✓</td>
<td>21</td>
<td>9.60</td>
</tr>
<tr>
<td>Hi1-7</td>
<td>3</td>
<td>5</td>
<td>Private Spanish coll.</td>
<td>6.00</td>
<td>✓</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Hi1-8</td>
<td>4</td>
<td>6</td>
<td>Jesús Vico 135, 3077</td>
<td>6.14</td>
<td>→</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hi1-9</td>
<td>5</td>
<td>7</td>
<td>BM 2002.0102.115</td>
<td>6.43</td>
<td>\</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hi1-10</td>
<td>5</td>
<td>8</td>
<td>BM 2002.0102.116</td>
<td>6.14</td>
<td>→</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hi1-11</td>
<td>6</td>
<td>9</td>
<td>Real Academia de la Historia, 1 [14]</td>
<td>5.71</td>
<td>↓</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Hi1-12</td>
<td>7</td>
<td>10</td>
<td>Münz Zentrum 76, 435</td>
<td>6.14</td>
<td>\</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Hi1-13</td>
<td>8</td>
<td>11</td>
<td>Aureo &amp; Calicó 262, 100</td>
<td>6.15</td>
<td>\</td>
<td>22</td>
<td>9.65</td>
</tr>
<tr>
<td>Hi2-1</td>
<td>1</td>
<td>1</td>
<td>Tivissa Hoard IV, 43 (priv. coll.)</td>
<td>5.10</td>
<td>\</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hi2-2</td>
<td>1</td>
<td>2</td>
<td>Aureo &amp; Calicó 263, 3011</td>
<td>6.25</td>
<td>\</td>
<td>21</td>
<td>9.65</td>
</tr>
<tr>
<td>Hi2-3</td>
<td>1</td>
<td>3</td>
<td>BnF 125-Ailly (REP-1573)</td>
<td>6.08</td>
<td>↓</td>
<td>21</td>
<td>9.65</td>
</tr>
<tr>
<td>Hi2-4</td>
<td>2</td>
<td>3</td>
<td>La Palma (inv. 182, Noguera)</td>
<td>6.55</td>
<td>\</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hi2-5</td>
<td>2</td>
<td>4</td>
<td>Tivissa Hoard IV, 42 (priv. coll.)</td>
<td>5.15</td>
<td>\</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hi2-6</td>
<td>3</td>
<td>5</td>
<td>La Palma (inv. 146, Noguera)</td>
<td>6.70</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In fig. 2, one can see these differences in both the enlarged obverses and reverses of Hi1-6 and Hi2-4. [15]

---

[12] This Spanish dealer has informed us that he bought this coin from France.
[13] www.tesorillo.com/republica/anonima/anonima.htm, no. 3; this coin was bought in 2003 from a Barcelona dealer.
[15] Hi1 corresponds to LG IV-B1. Hi1-3, having a distinctive obverse style, was assigned by Le Gentilhomme to the separate group LG IV-B3, while we think it is just a die with stronger features as shown by its reverse, die-linked with a ‘normal’ style obverse of the series Hi1. On the other hand, Hi2-3 (BnF 125-Ailly (REP-1573)) was assigned by Le Gentilhomme to IV-B1, but its features differ from Hi1 (see text).
All of these differences and the absence (so far) of die-links between the two groups would suggest at least a break in the production of these earliest quadrigati. Two successive series could be envisaged, as implied by our proposed classification: H12 seems isolated from H11, and the former only occurs in both the Tivissa iv and La Palma finds.

As one can readily see, these series are still quite under-represented: we have counted 5 and 14 singletons for the obverse and reverse, which equates to a very poor coverage\(^{[16]}\) of 74% and 26% for obverse and reverse respectively. This probably indicates that there were originally several more dies for this group.

**Coinage B: the relief quadrigati (Hr1 and Hr2)**

The Hr2 series is much better represented by the extant specimens; in fact, there is no singleton (coverage is 100%), as can be seen from the corpus in Table 2. The 17 known specimens are almost as numerous as the 19 of the incuse series, but they were produced by just three obverse and four reverse dies. All the dies have apparently been engraved by the same hand, and their style is reasonably homogeneous, although their uniformity is slightly interrupted by obv. 3, which has a larger head. However, this obverse is die-linked via Hr2-13 and Hr2-14 to obv. 2, whose design dominates this series. This is illustrated in the enlargements in fig. 3.

\(^{[16]}\) Esty 2011.
The relief series is therefore much smaller than the incuse one; the actual count is 3 obv. and 4 rev. dies compared with resp. 11 and 16 of the incuse series. Its homogeneity indicates that it was produced at a single moment.

Its style of engraving is distinctive and does not have any points of comparison with other quadrigati, although there is some resemblance with obverse design of Hiz, as can be seen in the janiform profile and the small sideburns, perhaps indicating some influence from the earlier series. The janiform head has a receding and sharp nose, while the reverse depicts a small and simply drawn quadriga with a disproportionately large Jupiter. The legend is in relief and the frame of the legend is formed by two parallel lines (above and below); only on rev. 4 are the lines on the side tilted vertically (on rev. 1 only the one on the right is tilted). As can be seen in fig. 3, the letters of the legend ROMA have no trace of any dots to mark the start or end of the lines.\textsuperscript{[17]}

\begin{table}[!h]
\centering
\caption{Coinage B: quadrigati with relief legend (Hr2 corresponds to LG II-E)}
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline
Cat. & Obv. & Rev. & Reference & W (g) & Axis & $\varnothing$ (mm) \ Y (g/cm$^3$) \\
\hline
Hr1-1 & 1 & 1 & Antonio Hinojosa coll. & 3.55 & \uparrow & 23 \\
Hr2-1 & 1 & 1 & Aureo & Calicó 243, 2 & 6.50 & \checkmark & 20 \\
Hr2-2 & 1 & 1 & Aureo IX/1995, 94 & 6.02 & & \\
Hr2-3 & 1 & 1 & Aureo & Calicó 248, 2081 & 6.31 & \uparrow & 20 \\
Hr2-4 & 1 & 1 & eBay Spain (Sertorius, x/2014) & 6.30 & \checkmark & \\
Hr2-5 & 1 & 2 & BnF 116-Ally (REP-1564) & 6.40 & \checkmark & 22 & 9.55 \\
Hr2-6 & 1 & 2 & La Palma (inv. 13, Noguera) & 6.20 & \checkmark & 20 \\
Hr2-7 & 1 & 2 & La Palma (inv. 55, Noguera) & 5.90 & \checkmark & 20 \\
Hr2-8 & 1 & 2 & eBay Spain VIII/2014 (from priv. coll. Sevilla province) & 6.15 & \checkmark & \\
Hr2-9 & 1 & 2 & eBay Spain VII/2014 (from priv. coll. Sevilla province) & 5.60 & \checkmark & 22 & 9.35 \\
Hr2-10 & 2 & 2 & SNR Milano 163 & 5.41 & \checkmark & 20 \\
Hr2-11 & 2 & 2 & Priv. Spanish coll. (Imperio-Numismático.com) & 5.50 & \checkmark & \\
Hr2-12 & 2 & 3 & Real Academia de la Historia, 2 & 6.11 & \checkmark & 20 \\
Hr2-13 & 2 & 4 & Aureo XII/2004, 6 & 6.10 & \checkmark & \\
Hr2-14 & 3 & 4 & Noble 62, 2202 (ex Seaby’s, 111/1974) & 6.14 & \checkmark & \\
Hr2-15 & 3 & 3 & Hervera I/2004, 116 & \checkmark & \\
Hr2-16 & 3 & 3 & Jesús Vico 129, 83 & \checkmark & 21 \\
Hr2-17 & 3 & 3 & Ibercoins 7, 2022 & 6.07 & \checkmark & \\
\hline
\end{tabular}
\end{table}

\textsuperscript{[17]} This same feature occurs on coins of the diobol, drachm and quadrigatus group: see also fig. 4.
For this series there is less find evidence. We have only the two pieces from the La Palma site, which are also the two best preserved specimens, both from the same dies. However, the Spanish association is again clear, and even stronger than it was for the incuse coins, since no fewer than 14 pieces come from Spanish sales or collections.

It is worth noting and discussing the cut piece Hr1 (see Plate 2, top-left); it weighs 3.55 g, and a c. 6.00 g original piece can be safely estimated. This coin is unusual inasmuch as it has a relief legend with the same features discussed before (large letters, similar frame, and overall similar to rev. 3 of the relief series: see specimen Hr2-15), but its obverse clearly belongs to the H12 incuse series. Compare its obverse with, e.g., H12-4: it has a neck truncation with a hint of V-shape and the same way of rendering the sideburns. Possibly this was a different, but tiny, transitional series between the incuse and relief emissions.

Coinage C: diobol, drachm and quadrigatus (Ht1)

Ht1/3, diobol. [19] The recently discovered Ht1/3-3 at La Palma is the only known piece of the rare and enigmatic series RRC 28/5 with a certain provenance. It seems significant that the same site has also produced two specimens of the incuse and two of the relief quadrigati.

A complete corpus of the specimens of this silver fraction is given in Table 3. RRC listed the type as 28/5. The only piece known at that time was the one in the Naples Museum (Santangelo 1520), weighing 0.96 g, which Crawford called a silver litra. It remained unique until Ht1/3-6 appeared at auction in 1984. Five other specimens, all with similar characteristics, appeared at auction between 1999 and 2006: Ht1/3-1, 9, 10, 2, and 4. In the description of NAC 61, lot 101, [20] R. Russo and R. Witschonke referred to Ht1/3-6 as "supposedly coming from Spain", and to the others as "all presumably with the same origin". The piece Ht1/3-5 recently sold by Jesús Vico reinforces the Spanish association, but only the La Palma specimen provides solid evidence for attributing this series to a Spanish mint.

[18] From Antonio Hinojosa Pereja’s collection; we thank Mr. Hinojosa for the picture of the coin and information about it: it was found in the big Carthaginian camp near the little village of Las Infantas. The camp was on the important route from Obulco (Porcuna) to Castulo (Linares, both in Jaén province), and is most likely to be dated to the last period of Carthaginian occupation of Spain, when the Punic armies moved to Baetica (modern Andalucia) and were finally defeated at Baecula (close to Linares) in 208 BC by the young Scipio.

The site is very close to Jaén (about 10 km north), on the right side of the road from Jaén to Madrid; thousands of bronze coins (mainly Punic) have been found there from 1998 to date.

[19] For its denomination, see the discussion below.

The die study of the fractional pieces has resulted in an unexpected result: seven (or eight) obverse dies are coupled with just one reverse. This is a completely unprecedented ratio in all the die studies undertaken so far on the early Roman Republican series, and it is hard to explain. It is therefore possible that the janiform head was actually the reverse punch die for this series, and/or that the very small size of the die was not properly managed by the mint personnel.

_Ht1/2 and Ht1/1, drachm and quadrigatus._ We can associate two other silver types with the Spanish Roman Republican pre-_denarius_ coinage: the

---

**Table 3 – Coinage C. diobol, drachm and quadrigatus**

<table>
<thead>
<tr>
<th>Cat.</th>
<th>Obv. die</th>
<th>Rev. die</th>
<th>Reference</th>
<th>W (g)</th>
<th>Axis</th>
<th>Ø (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ht1/1-1</td>
<td>1</td>
<td>1</td>
<td>Aureo &amp; Calícó 227, 22 ex A&amp;C 222, 15</td>
<td>6.30</td>
<td>←</td>
<td></td>
</tr>
<tr>
<td>Ht1/2-1</td>
<td>1</td>
<td>1</td>
<td>Real Academia de la Historia, 2bis</td>
<td>3.06</td>
<td>←</td>
<td>17</td>
</tr>
<tr>
<td>Ht1/2-2</td>
<td>1</td>
<td>1</td>
<td>Cerro Colorado hoard</td>
<td>2.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ht1/3-1</td>
<td>1</td>
<td>1</td>
<td>NAC 72, 405 (ex NYS II, 177)</td>
<td>1.02</td>
<td>←</td>
<td>12</td>
</tr>
<tr>
<td>Ht1/3-2</td>
<td>2</td>
<td>1</td>
<td>NAC 54, 149 (ex NAC 27, 206)</td>
<td>1.00</td>
<td>←</td>
<td>12</td>
</tr>
<tr>
<td>Ht1/3-3</td>
<td>2</td>
<td>1</td>
<td>La Palma [21] (inv. 282, Noguera)</td>
<td>0.82</td>
<td>←</td>
<td></td>
</tr>
<tr>
<td>Ht1/3-4</td>
<td>3</td>
<td>1</td>
<td>CNG 68, 1336</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ht1/3-5</td>
<td>3</td>
<td>1</td>
<td>Vico 119, 564</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ht1/3-6</td>
<td>3</td>
<td>1</td>
<td>Schweizerische Kreditanstalt 2, 375</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ht1/3-7</td>
<td>4</td>
<td>1</td>
<td>Napoli, Santangelo 1520</td>
<td>0.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ht1/3-8</td>
<td>5</td>
<td>1</td>
<td>Gorny &amp; Mosch 175, 191</td>
<td>1.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ht1/3-9</td>
<td>6</td>
<td>1</td>
<td>Aureo xii/2000, 3</td>
<td>0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ht1/3-10</td>
<td>7</td>
<td>1</td>
<td>Ars Antiqua 2, 149</td>
<td>0.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ht1/3-11</td>
<td>8?</td>
<td>1</td>
<td>NAC 61, 101</td>
<td>0.82</td>
<td>←</td>
<td>12</td>
</tr>
</tbody>
</table>

---


[22] Ht1/3-11 is in such a poor state of preservation that it is hard to make a die comparison; it seems to be from a new die, but it could also be one of the other seven.

[23] Usually the reverse die is the one that breaks earlier and the number of reverses is said to exceed by 20% the obverses in _RRC_. This is not always the case in the series die-counted so far, but holds true as a rough indication.

[24] There also seem to be Spanish issues of the _denarius_ system, associated especially with the _victoriatus_, and we plan to perform a full die study of them later. Here it is worth mentioning the coins reported by García-Bellido 2011, p. 676-685: a type recalling the _victoriatus_, without the _ROMA_ legend, but with Victoria crowning the letter _R_ (for Roma?), which has the weight standard of a half drachm. There are also related smaller denominations, with the same letter _R_: 7 obols, 4 hemiobols and _1 tetartemorion_, mostly from hoards. See also García Garrido 1990, p. 37-78 & 1996, p. 67-75. All these fractions might be related to the coins of the Diobol, Drachm and _Quadrigatus_ group, but more study is needed.

Many thanks to Pere Pau Ripollès for bringing them to our attention.
drachm with the oath-taking scene reverse, which is so far known in only two specimens, and a quadrigatus, known from only a single specimen sold in the September 2010 sale by Aureo & Calicó. These three coins are listed at the beginning of Table 3 and shown in plate 3.

Until the publication in 2007 of Ht1/2-2, the only known specimen of the drachm was Ht1/2-1, in the Real Academia de la Historia in Madrid, where it was donated by Jesús Vico in approximately 2003, and so this series has not yet received much attention. The coin is a drachm; both pieces are very close to 3.00 g. Its types are the same as the gold issues RRC 28/1-2: a laureate janiform masculine head on the obverse and an oath-taking scene on the reverse. Some details differ from the gold prototype, but one is struck by the overall similarity.

Unfortunately the condition of the Cerro Colorado drachm is not very good for the purposes of die comparison, mainly due to some double striking on the obverse, which is also damaged. The reverse has also some problems of delamination, and suffers from loss of detail.

The Real Academia specimen is, overall, better preserved, but it is still not possible to make a definitive comparison of the obverse dies; for the reverse, however, a small die flow, a tiny dot to the right of the third vertical stroke of the Λ (Λ; see fig. 4), allows us to see they are struck from the same die. When we also consider that the two pieces have the same die axis, and that many of the details on the obverse match up, we are inclined to conclude that the two coins are the product of the same pair of dies.

[25] Bravo Jiménez et al. 2009, p. 97–110. We thank D’ Bravo Jiménez for kindly providing us with the high quality hoard images. The coin is now at the Museo Arqueológico Provincial de Málaga.


[27] When considering the reverse type, it is also tempting – but possibly speculative – to relate the tiny emission of drachms (only one pair of dies) to the recovery of Saguntum. That may not have been such a huge achievement from a military point of view, but very likely it had a considerable psychological impact, which could have been reinforced by the minting of this drachm, a ‘symbole parlant’ celebrating a foedus between allies and having the same significance as the gold emission RRC 28/1-2, dated 217–216, which sets a terminus post quem for the Spanish issue.

Of course, as proposed by García-Bellido 2000-2001, p. 679, the coin might also refer to another of the various treaties that the Scipiones concluded with the local tribes.


[29] García-Bellido 2000-2001 reports a fineness of 98.33% for the piece in the Real Academia de la Historia; however, the technique used, called EDS (Energy Dispersive X-ray Analysis) or also EDS (Energy Dispersive X-ray spectrometry), does not penetrate the metal for more than 10 μm, while the actual metal alloy is about 200 μm below the surface (see, e.g., Ager 2013, p. 241-244).
There are four details that, to the best of our knowledge, have never been noted so far, which are important in establishing the relationships between the three denominations which we have brought together in this group.

The first is the design of the janiform head. The janiform head of the drachm is very close to that of the silver fraction Ht1/3 (RRC 28/5) and of the quadrigatus Ht1/1. As one can see from the enlargements in fig. 4, the obverses share the same asymmetric way of rendering the head, the same rendering of the sideburns, which at their lower part split into two parts, and the laurel leaves are always quite sharp and slightly limp.

The second is the way in which the neck truncation is rendered on the quadrigatus and the diobols. The neck is perfectly vertical, without any curvature, and its truncation is shown as a sort of straight line in relief, which extends a little beyond its transverse shape. This is a very rare feature, apparently found only on a few dies of LG I-A3 and the related half quadrigati.

The third important detail is the way in which the legend ROMA is rendered; this is a completely sui generis engraving technique, one that combines letters in relief lying on a slightly concave tablet,[30] and additionally topped by a sort of exergual line. These details can be seen more clearly in

---

[30] The quadrigatus LG II-A, which has also a relief legend on a raised tablet, is found in hoards with the incuse emissions; therefore it is earlier than the series where the relief legend is just within a linear frame. However, in our provisional quadrigati corpus there are exceptions in dies of LG II-B1, B4 and D, showing raised tablets which are rendered in many different ways.
fig. 4. One can also observe that the legends on the drachm and of the *quadrigatus* match also in the same way that the letters are engraved in thick lines, apparently without the typical terminal dots. One can also observe the two inner strokes of the Λ and see how they meet with only a small space in between (ΛΛ) and how the Ο is (almost) closed at its bottom (Ο).

The fourth detail is technical, and consists of the signs of the technique used to produce the flans, which all show a sort of faceted contour. This is best seen on the two drachms, on the fractional Ητ 1/3, 4 and 9, and also on the *quadrigatus* Ητ 1/1.

In summary, the *quadrigatus* Ητ 1/1 seems to share with the drachm Ητ 1/2 the same style of legend and the shape of flan. The latter, together with the same janiform head, links the drachm to the fraction, which are related to the *quadrigatus* by the neck truncation. This is why we think this *quadrigatus* belongs here with the drachm and the diobol to form a multi-denominational issue, albeit one of a very small size.

The three denominations seem most likely to be contemporary and produced at the same mint, but they have little or no stylistic relation with the other Spanish *quadrigati*, which were probably struck at different times and on different occasions. However, we can note that the reverse of Ητ 1/1 retains the same downward tilt of the quadriga as on the incuse *quadrigati*, but has no resemblance with the series with the legend in relief.

*The metrology of the Spanish pre-denarius Roman Republican coinage*

The physical parameters of these coins can be seen more clearly when plotted (see fig. 5). It is clear that the die axis of the Spanish Roman Republican pre-denarius coinage has no preferential orientation, but is random. The sample is too small to assign any significance to crowding in the interval 1 h (7) to 6 h (1) of the *quadrigati*.

The weight histograms are quite enlightening. First of all, the *quadrigati* seem to have a reduced weight standard at around 6.00 g compared to the incuse Italian series (around 6.60 g). The vertical lines in the weight histograms show their median weights; as can be seen, there is no difference between the incuse and relief series: both have 6.13 g.

Regarding the quality of the silver, very little can be said, but we can comment on the available Y measures, mainly from the pieces at the BnF.\[31\] No single result is above 10 (which would mean decent silver; $Y_{Cu} = 10.50 - Y_{Ag} = 8.95$); instead we have four incuse pieces at 9.65, one at 9.60, one at 9.30 and one one as low as 8.73; for the relief series, one at 9.35 and one at 9.55 (all aforementioned values in g/cm$^3$).

\[31\] We would like to thank Dominique Hollard for allowing us to study and photograph all the *quadrigati* of the BnF in Paris.

\[32\] The reason for a Y value lower than the one of copper is investigated and explained in Debernardi *et al.*, *in preparation*. 
Fig. 5 – Histograms of the weight (at right, normalized to didrachm) and die axis (at left) of the Spanish series.
Overall we can say that the two coinages seem to have quite a similar and debased silver quality, as is also clear from the appearance of the coins.

No γ data for the fractions is available, but their silver looks quite similar to that of the quadrigati. In summary we can say that the Spanish silver coinage was probably produced by adding copper to silver, which seems quite reasonable when one recalls the shortage of resources the two Scipios were facing (see below).

Last but not least, the weight histograms can help us in determining the denomination of RRC 28/5. In these histograms, the quadrigatus has been chosen to be the reference denomination. Therefore the drachms have been multiplied by 2, but what to do with RRC 28/5? It can be seen that multiplying its weights by 6 gives a quite good fit with the distributions of the other denominations; the median weight would be 5.88 g (actually 0.98 g thereof, i.e. 6.13 and 6.05 g for the didrachms and (adjusted) drachm respectively. Therefore, in our opinion, the fraction is presumably a diobol, i.e. ½ of a didrachm or ½ of a drachm. Within the denarius system it would have been called a sestertius, i.e. ½ scruple of silver for a denarius based on 4 scruples. However the fraction belongs to the earlier didrachm system and should be more properly called a diobol. The denomination is not otherwise encountered in the Roman Republican coinage; we have just the obol, which occurs only once (RRC 13/2) and is known in only three specimens.

Mints and dates

It is worth summarizing the historical background before offering some proposals for the mints and dates of these coinages. Our main source for the war in Spain is Livy, since Polybius is incomplete for the relevant years.

Gnaeus Scipio, brother and legate of Publius Scipio, the consul of 218 BC, was sent late that year to Spain (xxi, 60–61), the crucial Punic military base and resource-centre for the war. The purpose was to control the Carthaginians in Spain, to cut off any support they could give to Hannibal in Italy, and to maintain and reinforce relationships with the local tribes. Landing at Emporion, he took control of the region north of the Ebro river and, from this date, Tarraco became the main base for the Romans; it was modified and fortified for that purpose (Pliny n.H. III, 21). Cnaeus’ campaign

[33] This small silver fraction was previously thought to be a litra, however without great conviction. As the unique specimen known to M.H. Crawford [1985] weighs about ½ of a quadrigatus, he regarded it as probably being a silver as, an opinion shared by R. Witschonke (description of NAC 61, lot 101, with footnote 16). On the other hand, A. Burnett [1998] suggested the coin could be ½ or an obol, like the fractional coin of the first issue (RRC 13/2, which Crawford called a ‘litra’).

[34] See n. 32.

[35] De Sanctis 1917, p. 239–247; see also Richardson 1996, p. 9–40. We would like to thank Mark Passehl for his comments and help for this section.
in 217 BC was quite successful, winning command of the sea[36] and conducting extensive and successful coastal raids (including against Carthago Nova itself) during the spring before his brother Publius arrived, as proconsul, at Tarraco with reinforcements (xxii, 19-22). The command of the two Scipios was reconfirmed year after year. In 215 BC they won the battle of Hibera (or Dertosa, the actual Tortosa, 20 km inland from the Ebro estuary), the first really important Roman victory of the whole war. It caused the big Punic reinforcements ready to join Hannibal in Italy to be redirected to Spain. On that occasion P. Scipio asked Rome for more help (xxiii 48, 4), since he wanted to profit from the victory, trying to attract to his side the tribes on the right of the Ebro river. But Rome, which was suffering harsh times, could send just *vestimenta frumentum Hispaniensi exercitui* (xxiii 48, 12).

In 212 BC the Romans attacked the Carthaginians beyond the Ebro river and took Saguntum (xxiv 42, 9-11). However, soon after, the Carthaginians had as many as three armies in Spain, which resulted in a complete Roman defeat and the deaths of the Scipios, in 211 BC (xxv, 34-36).

What followed is not relevant to the present study; 211 BC is the *terminus post quem* for the start of the denarius system[37] according to Crawford. [38] From the above summary one can immediately set the *termini post quem* and *ante quem* for the coinages that have been discussed: 217-211 BC.

Perhaps one can speculate a little more and try to relate the coinages to some of the main events. In particular, it is tempting to assign the larger incuse emission to the period after the battle of Himera, when the Senate could not satisfy all Scipio’s requests. The treasury in Rome was empty and it was not possible to send any money to Spain. Cn. Scipio, knowing that, anticipated the Senate’s denial by announcing he would make his own arrangements[39] for the *pecuniam in stipendium*, which might therefore be regarded as being closely related to the coinages under discussion. If so, then late 215 or early 214 BC would be a possible date for the incuse *quadrigati*, imitating the contemporary incuse *quadrigatus* coinage which was circulating in Italy at the time. [40]

---

[36] Of particular relevance is the naval victory at the Ebro estuary; see also Noguera Guillén et al. 2013, where the topic is treated in more detail.

[37] The La Palma finds clearly place all the Coinages A, B and C in the pre-denarius stage; in fact, La Palma has also produced many semifibril bronzes (RRC 38 and 39), completely consistent with the *quadrigatus*, but no coins of the *denarius* system.

[38] The consensus on this date, even among the scholars supporting the ‘middle chronology’, is not omnium and a date for the *denarius* of 2-3 years earlier is nowadays proposed by several scholars. This would not affect the present discussion very much, because the *denarius* system started slowly and could not have reached Spain before at least the arrival of Scipio Africanus in late 211.

[39] xxiii 48, 5: *Quod ad stipendium attinet, si aerarium inops sit, se aliquam rationem inituros quomodo ab Hispanic sumatur.*

After this first coinage, the way was open for other ones. There are no records of any silver ever being sent to Spain, so the Scipios might also have needed to produce Coinages C and B, the latter possibly being minted shortly before their deaths.

It is less clear why fractions were produced. It is possible that part of Coinage C (in particular the diobols?) was meant for donatives to local tribes in the period 215-212 BC, when there were strong efforts to gain alliances with the local populations. The fractions could have been a way to provide smaller denominations, which were much used in the region, as is shown, e.g., by the many cut Roman Republican coins found in Spain [41] (including, e.g., Hr1-1 in Table 2), and by the local production there of many small silver denominations.[42]

Regarding the mint(s), Tarraco seems the most probable candidate for the two quadrigati series (Coinages A and B): it was the main base of Roman operations in Spain since the beginning of their campaigns there, and where the Romans had most of their winter quarters. For Coinage C (quadrigatus and fractions) the question of the mint is more difficult; it could well also be Tarraco, but any other large Roman military camp situated between it and the Ebro river would also be possible. However, our speculations about the type of the drachms might also suggest a mint at or around Saguntum, [43] or even maybe a military mint set up during one of the campaigns of the Scipios to south-western Spain.

Conclusions

It has been shown that in the early years of the Second Punic War, when the two Scipio brothers held command in Spain, at least seven silver emissions were produced in the name of Rome: three small- to medium-sized issues of quadrigati, one small emission of diobols, and three much smaller emissions: two of quadrigati and one of drachms. The minting of Roman coins in Spain had not previously been suspected; and the coinages

[41] See e.g. Ripollès et al. 2009, p. 163-182. There are also cut pieces in the Cerro Colorado hoard (see n. 26).

[42] The local production of silver fractions was massive and they often appear in Spanish hoards at the end of the 3rd c. BC. Villaonga 1998, p. 165-183, nos. 601-886, listed and catalogued the fractions that imitate the ones of Emporion and Massalia (Villaonga 2003, p. 110-114, nos. 701-844), which appear in the silver hoards of the Second Punic war. They are abundant in the Villarrubia de los Ojos hoard (García Garrido 1990). Other hoards with local fractions include the one from Riberad’Ebre (Crusafont 2006, p. 39-53). Similarly obols and hemiobols were produced in the Arse-Saguntum region (Ripollès & Llorens 2002, p. 360-371, nos. 30-58).

[43] See n. 28. This would also match with the south-western provenances of the two known specimens, while the quadrigati are predominantly from the north-east of Spain (the Tivissa and La Palma finds, and perhaps also the many pieces sold by Aureo and other dealers in Barcelona).
can now join those securely attributed to Sicily and Apulia\textsuperscript{[44]} as evidence for the decentralization of Roman minting, forced on them by the circumstances of the Second Punic War.

BIBLIOGRAPHY


Crawford 1985 = M.H. Crawford, *Coinage & Money under the Roman Republic: Italy & the Mediterranean Economy*.


Esty 2011 = Warren W. Esty, The geometric model for estimating the number of dies, in *Fr. de Callataÿ, Quantifying Monetary Supplies in Greco-Roman Times*, Edipuglia, p. 43-58.

\textsuperscript{[44]} Debernardi forthcoming.


**RRC** = see Crawford 1974.


Plate 1 – Coinage A: the incuse Spanish quadrigatus series (scale c. 100%) (references in bold = Spanish provenance)
Plate 2 – Coinage B: the relief Spanish quadrigatus series (scale c. 100%)
(references in bold = Spanish provenance)
Plate 3 – Coinage C: quadrigatus and drachm (scale c. 100%) and diobol (c. 150%)
(references in bold = Spanish provenance)