

**HERZOG'S ROMAN *TESSERAE*:  
THEIR NATURE AND PURPOSE REVISITED**

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## ABSTRACT

Lindsay M. Holman: *Herzog's Roman Tesserae: Their Nature and Purpose Revisited*  
(Under the Direction of Richard Talbert)

This dissertation reinterprets a distinctive type of inscribed ivory or bone label, which has been neglected for the past century, and contextualizes them within wider Roman labeling practices. Each of their four sides bears a Latin inscription: the first side names either a slave or freedman, the second names a Roman elite family, while the third and fourth sides bear a date (day, month, and consuls) between 96 BCE and 83 CE. Unlike many portable inscriptions, these *tesserae* have an exact date. In 1919 Rudolf Herzog, the last scholar to thoroughly study these *tesserae*, based his interpretation on about 120 of them. He proposed that Roman financial officials used them as labels to certify an amount or quality of coinage. Herzog's hypothesis has remained unchallenged; yet it is speculative and overdue for reconsideration.

By using digital photography and archiving techniques, my project documents Herzog's *tesserae* far more thoroughly as both inscriptions and physical objects. Visits to over 15 museums and libraries across Europe have enabled me to increase the known number of examples to 180 and to create the fullest photographic record and catalog possible. My contention is that Herzog's *tesserae* appear to be used to label prestigious objects, sometimes perhaps stored in temple complexes, although they need not be limited to this function. They are unique labels from the Roman world in that they explicitly name slaves and freedmen, and emphasize their role in the inspection of prestigious objects. I have developed a typology for the changes in form over the period during which they were used. I have also taken the opportunity to compare Herzog's *tesserae* to other groups of rectangular *tesserae* made for different purposes, such as tribal and gaming *tesserae*. These comparisons reveal that cultural preferences dictated their aesthetics and production from 96 BCE to 33 BCE, while functional requirements necessitated a change in their physical form between 32 BCE and 83 CE.

## ACKNOWLEDGEMENTS

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## ABBREVIATIONS

<i>AdI</i>	<i>Annali dell' Instituto di corrispondenza archeologica</i>
<i>AE</i>	<i>L'Année Épigraphique</i>
<i>AJA</i>	<i>American Journal of Archaeology</i>
<i>Annona</i>	<i>Annona Epigraphica Austriaca</i>
<i>ANRW</i>	<i>Aufstieg und Niedergang der Römischen Welt: Geschichte und Kultur Roms im Spiegel der Neueren Forschung</i>
<i>AnzWien</i>	<i>Anzeiger der Österreichischen Akademie der Wissenschaften, Wien</i>
<i>ArchCl</i>	<i>Archeologia Classica</i>
<i>ASchw</i>	<i>Archäologie der Schweiz</i>
<i>BAR</i>	<i>British Archaeological Reports</i>
<i>BCH</i>	<i>Bulletin de Correspondance Hellénique</i>
<i>BCom</i>	<i>Bullettino della Commissione archeologica comunale di Roma</i>
<i>BdI</i>	<i>Bullettino dell' Instituto di corrispondenza archeologica</i>
<i>BEAN</i>	<i>Bulletin de l'École Antique de Nîmes</i>
<i>CIL</i>	<i>Corpus Inscriptionum Latinarum</i>
<i>CRAI</i>	<i>Comptes Rendus des séances de l'Académie des Inscriptions et Belles-Lettres</i>
<i>Epigraphica</i>	<i>Epigraphica. Rivista italiana di epigrafia</i>
<i>HEROM</i>	<i>Journal on Hellenistic and Roman Material Culture</i>
<i>Hesperia</i>	<i>Hesperia: The Journal of the American School of Classical Studies at Athens</i>
<i>ILLRP</i>	Degrassi, Attilio. 1963. <i>Inscriptiones Latinae Liberae Rei Publicae</i> . Florence: La Nuova Italia
<i>ILS</i>	Dessau, Hermann. 1892-1916. <i>Inscriptiones Latinae Selectae</i> . Berlin: Weidmann
<i>Imagines</i>	Degrassi, Attilio. 1965. <i>Inscriptiones Latinae Liberae Rei Publicae: Imagines</i> . Berlin: De Gruyter
<i>JASc</i>	<i>Journal of Archaeological Science</i>
<i>JRA</i>	<i>Journal of Roman Archaeology</i>
<i>JRS</i>	<i>The Journal of Roman Studies</i>
<i>MDAIR</i>	<i>Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung</i>
<i>MEFRA</i>	<i>Mélanges de l'École Française de Rome. Antiquité</i>
<i>NSc</i>	<i>Notizie degli Scavi di antichità</i>
<i>OCD4</i>	Hornblower, Simon and Antony Spawforth. 2012. <i>The Oxford Classical Dictionary</i> . Fourth Edition. Oxford: Oxford University Press
<i>ÖJh</i>	<i>Jahreshefte des Österreichischen Archäologischen Institutes in Wien</i>



- Picus* *Picus: Studi e ricerche sulle Marche nell'antichità*
- PIR* 1933-2015. *Prosopographia Imperii Romani saec. I. II. III.* Second Edition.
- RE* 1893-1978. Pauly-Wissowa-Kroll, *Real-Encyclopädie der klassischen Altertumswissenschaft.* Stuttgart
- RevArch* *Revue Archéologique*
- RIB* Collingwood, Robin G. and Richard P. Wright. 1965 –. *Roman Inscriptions of Britain.* Oxford: Oxford University Press
- RIC* Mattingly, Harold and Edward A. Sydenham. 1930. *Roman Imperial Coinage.* Vol. 3. London: Spink
- SEBarc* *Sylloge epigraphica Barcinonensis*
- ZPE* *Zeitschrift für Papyrologie und Epigraphik*

## CHAPTER 1: HERZOG'S ROMAN *TESSERAE*

### Section 1.1 Introduction

Herzog's *tesserae* are a category of 184 ivory or bone inscribed labels from the Roman world. They are oblong, four-sided labels measuring between twenty and eighty-eight mm long. Latin text is distributed across the four sides of the *tessera*. What these labels were called in antiquity is unknown. In modern times scholars have identified them as *tesserae gladiatoriae*, *tesserae nummulariae*, or *tesserae consulares* (discussed in Chapter 2). These identifications relate to either their purported function or the information inscribed upon them.

Herzog's *tesserae* have also been grouped within the broader category of *instrumentum domesticum*, portable inscribed objects related to commercial activity. As Alison Cooley argues, the category *instrumentum domesticum* is a "convenient dumping ground for all portable items that happen to have inscriptions upon them."<sup>1</sup> While the term is "an inaccurate but agreed way" to categorize inscribed portable objects, the main artefacts included in this category have been brick and tile-stamps, names inscribed upon lamps, stamps and graffiti on pottery.<sup>2</sup> Some have expanded the category to include inscribed silverware, jewelry, tokens (such as Herzog's *tesserae*), water pipes, sundials, slave collars, weights, and spindle-whorls.<sup>3</sup> It is not a category limited by material or by function.

I refer to these *tesserae* throughout as Herzog's *tesserae*. Rudolf Herzog is the last

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<sup>1</sup> Cooley (2012), 185.

<sup>2</sup> W.V. Harris (1993), 7.

<sup>3</sup> Cooley (2012), 185.

scholar to have examined them in depth.<sup>4</sup> His theory for their function is the most accepted in modern scholarship. His term, *tesserae nummulariae*, is the one most used for them.

The Latin text on Herzog's *tesserae* is crucial to differentiating these *tesserae* from other rectangular ivory and bone labels. It typically names an individual, a family, and a pair of consuls while also including an abbreviation for the verb *SPECTAVIT*. Not every example follows this pattern of text. Of the 184 *tesserae*, the vast majority (145) are datable – the earliest 96 BCE, the latest 83 CE. This type of portable label is unique in carrying such exact dating: approximately eighty percent can be precisely dated.

### **Section 1.2 Texts on Herzog's *Tesserae***

The texts on all sides are in Latin and read left to right. 141 of the 184 rectangular *tesserae* are inscribed on all four sides. The texts have been considered formulaic, maintaining a typical layout across the four sides. For approximately sixty-two percent of the total corpus (114 out of 184) and nearly eighty percent of those *tesserae* that can be dated to a specific year (113 out of 145), the text inscribed on each side follows this pattern: first side – name of a slave or freedman in the nominative; second side – an elite family name in the genitive; third side – *SP* or *SPECT*, day and month; fourth side – consuls' names.<sup>5</sup>

On eleven examples, there is no name in the genitive; instead, two or three names in the nominative appear on the first and second sides.<sup>6</sup> This occurs more frequently during the Principate, with only one example dating to the Republic. Other marked deviations from the

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<sup>4</sup> Herzog (1919) and (1937).

<sup>5</sup> *Tesserae* with damaged or worn sides are not included in the total of 114. Therefore, the number is possibly under reported. Cat. 162-184 are examples that seemingly never bore the abbreviation *SP* or are so damaged that it could not be reconstructed.

<sup>6</sup> Appendix 1: Cat. 51 (53 BCE), 84 (14 BCE), 88 (7 BCE), 92 (2 BCE), 93 (1 BCE), 106 (7 CE), 120 (24 CE), 125 (29 CE), 139 (66 CE), 166 (no specific date), 168 (no specific date).

standard textual formula occur, including examples inscribed on one, two, or three sides; these will be discussed in detail in Chapter 6.<sup>7</sup> Even so, by the middle of the first century BCE the text inscribed on each side consistently follows the typical layout.

### Section 1.3 Appearance of Herzog's *Tesserae*

Herzog's *tesserae* are small, oblong labels (Fig. 1.1). All but three are rectangular in section. These three are hexagonal.<sup>8</sup> The measurement of the length is most often discussed in treatments of Herzog's *tesserae*. The average length is 45.9 mm, while the median length is 46 mm.<sup>9</sup> The shortest *tessera* is only 20 mm long and the longest is 88 mm.<sup>10</sup> It is with the orientation of the inscriptions described above that measurements of width and height are given. Width is the measurement taken across the first side. Height is the measurement across the second side. The *tesserae* are a few mm wider than they are tall, averaging 9.62 mm wide and 7.27 mm tall (Table 1.1).

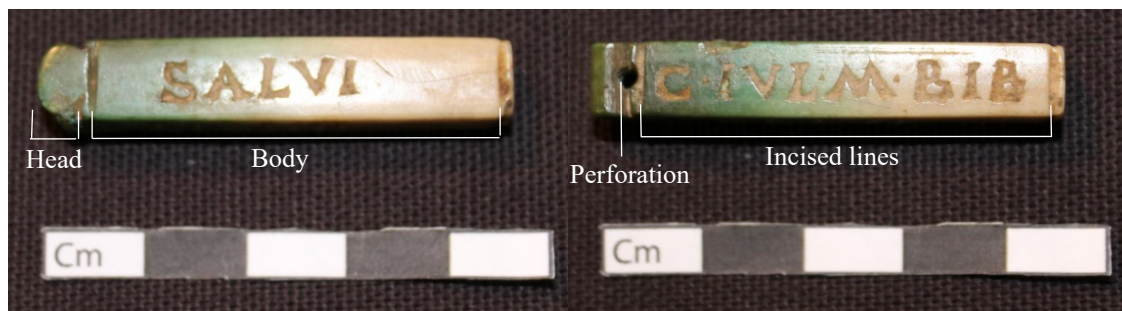


Fig. 1.1. Diagram of the parts of a *tessera*. The head is a circle, oval or trapezoid extension on the left side of the *tessera*. The body is the section where the *tessera* is inscribed. The perforation is the drilled hole where a string can pass through. Left: First side of Cat. 37. Right: Fourth side of Cat. 37.

<sup>7</sup> Cat. 3 has decoration on the second side. Cat. 152-157, 160, and 161-179 are undatable examples which intentionally used only two or three sides for text.

<sup>8</sup> Cat. 76 (25 BCE), Cat. 120 (24 CE), and Cat. 131 (42 CE).

<sup>9</sup> This calculation is based on the 128 examples with a recorded length.

<sup>10</sup> Cat. 151 is the shortest and Cat. 144 the longest.

Measurements	Minimum	Maximum	Average	Median
Length	20 mm	88 mm	45.9 mm	46 mm
Width	5 mm	15 mm	9.62 mm	9 mm
Height	3 mm	11 mm	7.27 mm	7 mm

Table 1.1 Measurements of Herzog's Roman *tesserae*.

Even though there is more space available for text on the first and third sides, the height of the text is consistent. Letters on each of the four sides are between two and six mm tall, with most letters measuring two to three mm tall. The average text height is two mm. A few letters are taller than the rest. This happens most often on the third side. *I*, *K*, and *L* are letters commonly taller than the others.

Herzog's Roman *tesserae* have a carved head, or handle as it is also called, on the left end.<sup>11</sup> Some have a distinct neck where the head attaches to the body. Herzog's *tesserae* are perforated so that they can be attached to an object. The size of the perforation is consistent at all dates. It always averages two mm across. The smallest perforation is only one mm in diameter, while the largest is five mm. The hole is just wide enough for a string or wire to suspend the *tessera* from an object. The exact location of the perforation and the shape of the head both vary based upon the period in which the *tessera* was made.<sup>12</sup>

The heads of the *tesserae* are typically either circular or trapezoidal, though a few examples have anthropomorphic heads.<sup>13</sup> One hundred and seven *tesserae* have a carved head on one end. Of the 125 examples I have studied or seen images of, fourteen are damaged and the

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<sup>11</sup> I adopt the terminology used by Andreau (1999), 80.

<sup>12</sup> Discussed in Chapter 5.

<sup>13</sup> Cat. 75 has a female head and Cat. 173 seems to have a helmeted head.

head is not preserved (approximately 11% of the studied corpus).<sup>14</sup> Four others from Ariminum (modern Rimini, Italy) appear to be made without a head.<sup>15</sup>

The *tesserae* themselves are quite plain, lacking much decoration. Aside from the carved head, typical decorative elements include incised lines at the top and bottom of the body, or in some cases a rectangular box that forms a frame around the inscription. Some undated examples have additional inscribed images which appear to resemble palm leaves, dolphins, lightning, or burning altars. Overall, the design of Herzog's *tesserae* is practical and lacks additional decorative elements.

Not only should the design of the *tesserae* be considered, but also the material used. 44.8% of the corpus is made of ivory, while less than 20% is made from bone.<sup>16</sup> There do appear to be regional preferences for the material used. All examples from Ariminum and Magdalensberg, Austria are made of bone. For 24% of the corpus there is no record of the material.<sup>17</sup> For 11% of the corpus, the material used is difficult to identify due to the condition of the *tessera*.

Bone and ivory are difficult to differentiate at first glance, as they are usually the same color.<sup>18</sup> Maggie Pedersen has noted that bone is a “simulant” of ivory. Bone and ivory both have

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<sup>14</sup> I have studied 110 examples in person and seen drawings or photos of fifteen other examples, all of which have a preserved head. For *tesserae* without a preserved head see: Cat. 8 (76 BCE), Cat. 16 (71 BCE), Cat. 41-42 (57 BCE), Cat. 53 (53 BCE ?), Cat. 77 (24 BCE), Cat. 97 (4 CE), Cat. 130 (39 CE), Cat. 137 (50-70 CE), Cat. 138 (61 CE), Cat. 145 (69-96 CE), Cat. 159 (undated), Cat. 175 (undated), Cat. 177 (undated).

<sup>15</sup> Cat. 181-184.

<sup>16</sup> Eighty-two examples are made of ivory, thirty-six are made from bone, while the material of twenty-one examples is not identifiable.

<sup>17</sup> The remaining forty-three examples, which I have not examined, have no recorded material. The bibliography for these examples does not specify whether they were made of bone or of ivory.

<sup>18</sup> Pedersen (2004), 89.

a “chalky blue fluorescence” in UV light.<sup>19</sup> The best method available to distinguish bone from ivory is to look for lines (of the canals) in bone, whereas ivory has different structural patterns depending on its source.<sup>20</sup>

Both ivory and bone can be polished. The bone examples from Magdalensberg are polished. Thus, in appearance their sheen resembles that on ivory examples.<sup>21</sup> However, bone does not polish as well as ivory, and thus the shine is more difficult to maintain.<sup>22</sup> Herzog’s *tesserae*, with a few exceptions, tend to be polished no matter the material. Both bone and ivory, except for hippopotamus ivory, can be stained.<sup>23</sup> Several examples appear to have been stained green or brown.<sup>24</sup> While not highly decorated, the design, choice of material, and craftsmanship of the *tesserae* show that these labels were meant to be seen.

#### **Section 1.4 Chapters Ahead**

This chapter introduces the texts and appearance of Herzog’s Roman *tesserae*. In Chapter 2, I turn to previous scholarship about the *tesserae* and their purported function. The current hypotheses for how they were used emphasize one aspect of them – the written texts inscribed on them – over other features such as material, size, and other physical characteristics. In Chapter 3, I outline my aims and methods in this dissertation. Chapter 4 reviews the methods used for compiling and organizing the catalog of these *tesserae* in Appendix 1.

The second half of my dissertation seeks to reintegrate the objects with their texts and to

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<sup>19</sup> Pedersen (2004), 90.

<sup>20</sup> Pedersen (2004), 72.

<sup>21</sup> See Pedersen (2004), 71, about polishing ivory and its “lasting lustre.” Cf. Cutler (1985), 7-17; Ayalon (2005), 6; Krzyszkowska (1990), 5 and 36.

<sup>22</sup> Pedersen (2004), 89.

<sup>23</sup> Pedersen (2004), 87 and 71.

<sup>24</sup> Appendix 1: Cat. 94, 127 and 178 were stained green. Cat. 27, 30, 51, 55, 58, 62, 96, 123 and 145 were stained brown.

situate these labels within wider Roman labeling practices. While I do treat the objects and texts in separate chapters (5 and 6 respectively), this is to give equal weight to the physical objects, as well as to the texts that have occupied the attention of modern scholars. In Chapter 7, I turn to ivory and bone *comparandae*. Comparison of Herzog's *tesserae* to other four-sided bone and ivory *tesserae* can elucidate the influences on the form of his *tesserae*, and can potentially shed light on how each type was used in antiquity. Finally, in Chapter 8 I return to the possible uses of Herzog's *tesserae*. Here I synthesize what their physical appearance and texts communicate about their function. I do not isolate the *tesserae* here, but take into account appropriately other labels and seals used throughout the Roman world.



## CHAPTER 2: THE PURPOSE OF HERZOG'S ROMAN *TESSERAE*

### Section 2.1 Introduction

We do not know what Herzog's *tesserae* were called in antiquity. There is no surviving mention of these labels in the Roman literary record. This is unsurprising given the way in which other categories of *tesserae* are treated in Roman literature. Rarely are the materials or shape of *tesserae* mentioned, if the word appears at all. With no ancient term, these labels have been called different names in the modern scholarship: *tesserae gladiatoriae*, *tesserae consulares*, and *tesserae nummulariae*. The terms are used to distinguish this category from other types of ivory and bone "tesserae". The terms *tesserae gladiatoriae* and *tesserae nummulariae* indicate who purportedly used them. *Tesserae consulares* refers to the consuls' names as a distinguishing feature of this category. Although approximately forty of Herzog's *tesserae* do not name the consuls on the fourth side, these forty have still been considered examples of Herzog's *tesserae*. There is also an inclination among scholars to identify Herzog's *tesserae* as tickets to spectacles or athletic contests. Because Herzog's *tesserae* do resemble in form other types of labels made from bone or ivory, conflation of the separate types by scholars and museum curators has occurred.

Ideas about their function rest on interpretation of the inscriptions. Scholars have naturally enough emphasized the identities of the elite families named on the second side. With generally more evidence for their activities surviving from the ancient world, this is unsurprising. Arguments for use of these *tesserae* have also attempted to account for the additional decoration on undated examples, the period of manufacture, and their geographic distribution.

A majority of Herzog's *tesserae* have reportedly been found in Italy, especially within Rome itself. Of the 184 known examples, thirty-six were said to have been found in Rome. Another forty-nine were reportedly purchased or once located in a museum there. Those recovered outside of Italy have been found primarily in the Western provinces, including one from Gallia Narbonensis,<sup>25</sup> nine from Noricum,<sup>26</sup> and two from Sicily.<sup>27</sup> Only two of the examples have come from further afield than Italy, Gaul, or Noricum: one from Ephesus<sup>28</sup> and the other from Hadrumetum in Africa.<sup>29</sup> This total of fourteen is a significant shift in distribution even since Andreau's 1999 treatment of the *tesserae*, in which he notes only six found outside of Italy.<sup>30</sup>

This chapter introduces the state of the scholarship on Herzog's *tesserae*. It falls into three phases: pre-Herzog treatments in the 19<sup>th</sup> century; Herzog's thesis published in 1919 and 1937; and post-Herzog scholarship from the second half of the 20<sup>th</sup> century. I also consider critiques of Herzog's identification that do not offer a significant reinterpretation of his hypothesis. Addressed last is the scholarship which considers these *tesserae* to be theater or spectacle tickets. I revisit the function of Herzog's *tesserae* in Chapter 8, using new approaches and giving equal weight to the physical features and texts.

## **Section 2.2 19<sup>th</sup> Century Scholarship: *Tesserae Gladiatoriae***

These *tesserae* became popular among 18<sup>th</sup> and 19<sup>th</sup> century historians and collectors

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<sup>25</sup> Cat. 24.

<sup>26</sup> Cat. 162-170.

<sup>27</sup> Both were purchased or found in Agrigentum. Cat. 12 and 147.

<sup>28</sup> Cat. 90.

<sup>29</sup> Cat. 83.

<sup>30</sup> Andreau (1999), 81, considered one example from Agrigentum as outside of Italy. The other five were from Ephesus, Hadrumetum, Arles, Vieille-Toulouse (Herzog 1937, no. 144) and Virunum.

because of their portability, durability, and inscriptions. Wilhelm Henzen produced an early study of this category of *tesserae* in 1848. He used the term *tesserae gladiatoriae*, arguing that they were worn by gladiators upon their manumission. He used this term to describe three examples in August Kestner's museum (originally in Rome, later in Hannover, Germany) and four *tesserae* in other collections.<sup>31</sup>

This identification, while popular in the 19<sup>th</sup> century, was not accepted by every scholar. When Theodor Mommsen published the texts of all extant examples in *CIL* Volume I (1863), he proposed the neutral term *tesserae consulares* from the naming of consuls on the fourth side.<sup>32</sup> Thus this category of *tesserae* was distinguished by a common textual feature rather than a supposed function. The editor of the revised Volume I (1918) followed Mommsen's example, publishing the Republican labels as *tesserae consulares*.<sup>33</sup>

Shortly after the publication of *CIL* I, Friedrich Ritschl published the known corpus of approximately seventy examples as "*tesserae gladiatoriae*."<sup>34</sup> His study not only included the texts on each side of the *tesserae*, but also three plates of drawings. Ritschl associated the name on the first side with a gladiator. To him, the abbreviation *SP* referred to spectacles or *spectatus* ("approved"), rather than observation or inspections.<sup>35</sup> None of the *tesserae* in his catalog had the entire term *SPECTAVIT* inscribed. An example from Arles had *SPECTAT* inscribed on the third side, and seemed therefore to support Ritschl's interpretation of *spectatus*.<sup>36</sup> He argued that

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<sup>31</sup> Henzen (1848), 287-289. Cat. 98 and 99 are in Kestner's collection. The third example in Kestner's collection was illegible, and it is unclear which *tessera* Henzen referred to. Henzen also mentions Cat. 77, 92, 121, and 177.

<sup>32</sup> Mommsen and Henzen considered 60 genuine examples: *CIL* I 717-776. An additional 30 were published as suspect examples or fakes: *CIL* I 776a-cc.

<sup>33</sup> Mommsen and Henzen (1863); Lommatzsch (1918).

<sup>34</sup> Sixty-seven, he argued, were authentic. His numbers 68-77 were suspect: Ritschl (1864), 337-343.

<sup>35</sup> Horace, *Ep.* 1.1.2. British Museum Trustees Report (1883), 36, for a discussion of this translation of *spectatus*.

<sup>36</sup> Ritschl (1864), Table 1.12.

these labels were perforated so that they could be worn around the gladiator's neck, on a chain or a rope, indicating that a gladiator had been manumitted.<sup>37</sup> They would have been distributed by the *munerarius* or the individual responsible for the games once a gladiator had won a certain number of contests.<sup>38</sup> This interpretation rested on a recently found bronze tablet, a *tessera muneris*, that recorded a gift of a *tessera* to a gladiator.<sup>39</sup> Mommsen, however, later rejected such identification with this group of *tesserae*, because it differed in material and dimensions, and was meant to be mounted on a wall.<sup>40</sup> Nevertheless, Ritschl's studies in 1864 and 1878 popularized the identification of the *tesserae* as objects used by gladiators.<sup>41</sup>

### 2.3 Herzog and *Tesserae Nummulariae*

In 1919, Rudolf Herzog published an up-to-date catalog of the 119 examples known. He was the first to propose the identification *tesserae nummulariae*. He argued that these tokens were associated with *nummularii*, money-changers, or other financial officials. He interpreted *SP* as an abbreviation for *SPECTAVIT*, which referred to the assaying of coins. By the time of his writing in 1919, examples with the entire word *SPECTAVIT* inscribed on one side had emerged. *Spectare* and *spectatio* appear in Latin texts describing assaying coinage or metals.<sup>42</sup> Thus, Herzog believed that these *tesserae* denoted when coins had been assayed for their quality or quantity. The *tessera* was then affixed to a bag of money via the perforation, functioning as an assurance of certification.

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<sup>37</sup> Ritschl (1864) and (1878).

<sup>38</sup> British Museum Trustees Report (1883), 36.

<sup>39</sup> *CIL* II 4963.

<sup>40</sup> Mommsen (1886), 276.

<sup>41</sup> Note, for example, Hübner (1867), 747-771; Henzen (1871), 151-152; Trustees of the British Museum (1883), 35-36.

<sup>42</sup> Plautus, *Persa* 3.3.437; Cicero, *Verr.* 3.181; Ovid, *Tristia* 1.5.25; See Frank (1933), 350, and Andreau (1999), 83.

Herzog focused on the prosopography of families named on the second side of the *tesserae*. He found that a significant portion of those named there were affiliated with financial operations of some kind. The names attested on the second side are linked with families of financial officials, as well as senatorial and equestrian families associated with large economic endeavors (*Grosskapitalisten*).<sup>43</sup> Herzog even argued that these *tesserae* were associated with Italian businessmen who had operations on Delos. He found that some of the names attested on *tesserae* (such as Fulvius, Licinius, and Pomponius) could relate to economic activity on Delos.<sup>44</sup> Max Cary also championed this association.<sup>45</sup>

Herzog concluded that many different types of financiers had access to these *tesserae*, such as monetary magistrates, *negotiatores* (businessmen in the provinces), tax-collectors, and large-scale private financiers, rather than just *nummularii*. He provided a modern parallel to support his assertion. In Frankfurt, prior to German unification in 1866, moneybags were transferred between banks with a label attached describing the total amount, weight, bank from which the money came, and the name of the employee who certified the amount and weight.<sup>46</sup> However, Herzog's *tesserae* never inscribe the amount or weight of money that was certified. It remains possible that there were standard amounts for the bags which were transported, or the amount was written directly on the bag.<sup>47</sup>

Herzog's hypothesis certainly addresses the difficulty of moving money throughout the Roman world. There was no central bank nor system of credit. The only currency used was

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<sup>43</sup> Herzog (1919), 31-37.

<sup>44</sup> Herzog (1919), 15-16.

<sup>45</sup> Cary (1923), 112-113.

<sup>46</sup> Herzog (1919), 31-33.

<sup>47</sup> For standard units, Cary (1923), 113, recounts Dr. Leaf's modern parallel of British £1,000 bags; Andreau (1999), 88.

coins. Thus, it was not possible to move money between banks. Sending money from one point to another would require physically moving coinage in a chest or another container that was sealed or secured. This package would no doubt have been sent with a trusted agent (possibly a slave) to assure it reached its destination.

## Section 2.4 Post-Herzog Scholarship

Following Herzog's first study, *tesserae nummulariae* supplanted *tesserae gladiatoriae* as the preferred identification for this category of labels.<sup>48</sup> Scholars such as Jean Andreau and Luigi Pedroni have found Herzog's suggestion largely convincing. However, they have offered further refinements, arguing that these labels were used by a more limited group of financiers.<sup>49</sup>

Andreau advanced two theories concerning the financial officials who used Herzog's *tesserae*. His favored proposal is that they were used exclusively by *societates publicanorum*, or legally recognized tax-collectors.<sup>50</sup> This, he maintains, would explain the narrow date range of these objects, because the *societates publicanorum* were less frequently relied on for public tax contracts towards the end of the first century CE.<sup>51</sup> For Andreau, this also explains why the geographic distribution is heavily concentrated on Rome. He argues that the *tesserae* were used to certify the funds sent back to Rome after tax collections.<sup>52</sup> The prevalence of slave assayers would have been likely, given the mixed workforce that *societates publicanorum* employed.<sup>53</sup>

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<sup>48</sup> Cary (1923), 110-113; Sandys (1927), 145-148; De Martino (1979), 149; Cooley (2012), 197-198; Kay (2014), 125-126; While his work focuses on ancient Greek banks, Bogaert (1968), 175, also supports Herzog's proposal.

<sup>49</sup> Andreau (1987), 486-487; Pedroni (1995), 161-178.

<sup>50</sup> Andreau (1987), 506.

<sup>51</sup> Demougin (1988). Cf. Badian (1972), 78, for the waning fortunes of some companies.

<sup>52</sup> Andreau (1987), 502; (1999), 89.

<sup>53</sup> Andreau (1999), 89, comments on the use of *familiae publicanorum* to encompass all agents working for the company. He (1999), 88, argues that the master named on the second side need not be part of the company, but could be the owner of the slave who was hired to work for the *societas publicanorum*. See also Ivanov (1910), 74-86, for the varied status of individuals employed and the professional nature of slaves and freedmen hired by *publicani*. See Badian (1972), 69-78, for the variation of sizes in these companies, from the Spanish mining

However, only three of the 184 examples yield the name of a *societas* (Cat. 2, 105, 156). If the *tesserae* were utilized exclusively by tax-collectors, more references to a *societas* would be expected.

The other possibility which Andreau put forward is that the *tesserae* were used by a narrower group of financiers than Herzog proposed. This argument hinges on eliminating groups of financiers Herzog believed used them rather than identifying a single group. First, Andreau ruled out *negotiatores* with business in the provinces, based on geographic distance and lack of close contacts between them. Due to the number of *tesserae* known to him (approximately 160), Andreau argued that public or professional deposit bankers, such as *argentarii* and *nummularii*, could not have been using these for the general Roman public. If utilized by banks, the name of the banker, not a slave assayer would be noted, or a mark of the bank itself. It is unlikely that the *tesserae* were utilized by state or Imperial institutions.<sup>54</sup> The complete lack of Imperial slaves attested as assayers suggests that the *tesserae* were not used by government financial administrators.<sup>55</sup> In fact no indication of an association with the Imperial administration is preserved on Herzog's *tesserae*. The abbreviation *IMP* appears only when naming consuls who are emperors.

For Andreau, this leaves a small group of private bankers utilizing the *tesserae* for the exchange of liquid money for large scale financial ventures.<sup>56</sup> The date range would be explained by the rise and decline of financial business activities in Rome. The number of extant *tesserae*

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operation in the 2<sup>nd</sup> century BCE with 40,000 workers, to the companies of more modest means.

<sup>54</sup> Andreau (1987), 506.

<sup>55</sup> Andreau (1999), 86, is dubious, as am I, of the identification of Tyrannus on Cat. 113 as the known slave of the Emperor Tiberius. I cannot read Livia's name on Cat. 75, leaving this example as suspect too. There are no other plausible examples of slaves of the Imperial family attested on the *tesserae*.

<sup>56</sup> Andreau (1999), 86-87.

would be due to their limited use. Herzog's *tesserae* would not have been used to certify every bag of coinage, but only to accompany ones exchanged through intermediaries before arriving at their destination.<sup>57</sup> Thus, Andreau argued, the *tesserae* were used during a specific transaction for which slave assayers who operated on behalf of freed bankers would reasonably be held responsible.

Andreau rejected the association between the *tesserae* and economic activity on Delos. He dismissed this association due to the absence of Herzog's *tesserae* on Delos, the fact that the names in common are not statistically significant in the corpus, and that they post-date the heyday of economic activity on Delos.<sup>58</sup> Delos had developed as a major commercial center by the mid to late second century BCE, prior to the earliest dated example of Herzog's *tesserae*.<sup>59</sup> Herzog's and Cary's hunch that some may have been recovered among the small finds at Delos still remains no more than that.<sup>60</sup> Eight *tesserae lusoriae*, a bone or ivory token of a similar shape and size to Herzog's *tesserae* perhaps used as gaming pieces, were recovered in public places such as the agora (two) and near the temple of Artemis (two) on Delos during the excavations in the 1930s. In the 1938 catalog of small finds, Waldemar Deonna included *tesserae nummulariae* as a parallel form to *tesserae lusoriae*. So the form was clearly known.<sup>61</sup> However, none of Herzog's *tesserae* has been recovered on Delos since Deonna's publication, even though their geographic distribution has shifted greatly since 1938.

Luigi Pedroni has offered a significant re-interpretation of Herzog's hypothesis. Like

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<sup>57</sup> Andreau (1999), 84.

<sup>58</sup> Andreau (1987), 490.

<sup>59</sup> Rauh (1993).

<sup>60</sup> Herzog (1919); Cary (1923), 113.

<sup>61</sup> Deonna (1938), 335-336, Pl. XCIV no. 827, 1-6 and no. 828.



Andreau, he suggested a theory which explains the unusually precise period of manufacture. Pedroni did not believe that another material supplanted bone and ivory to produce these labels after the heyday documented by consular names (96 BCE to 83 CE).<sup>62</sup> Rather, Pedroni ties the beginning and end of the *tesserae nummulariae* to policy changes enacted under Marius and Domitian.<sup>63</sup> Pedroni argued that the only change Domitian made that affected banking was his financial reform that concerned the army. Pedroni draws upon Suetonius' account of Domitian, in response to legionary revolts, forbidding soldiers to deposit more than 1,000 sesterces in the legionary banks.<sup>64</sup> Thus, he infers from Suetonius' comments that there was a regular practice of depositing large sums of salary which would exceed 1,000 sesterces and so call for certification. He then stretches the limits of the evidence by suggesting that the beginning of the period of production of Herzog's *tesserae* could be traced to Marian reforms of the military. This portion of his argument hinges on the assumption that *tesserae* without consular names could have been made around the end of the second century, as Herzog proposed. Pedroni does not satisfactorily explain why or how the *tesserae* would have been used in the wake of Marius' reforms, except that they would have been used to manage military deposits.<sup>65</sup> Pedroni further argues that the *tesserae* would have been used exclusively in a military context. Yet none have been found near fortifications or at settlements along the frontier. Most from secure contexts have been recovered in major cities, primarily in peninsular Italy. So were the deposits sent from *castra* to banks or secure locations in cities for safe-keeping?

Pedroni's proposal is no more than part of an article which presents *tesserae* finds that

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<sup>62</sup> Pedroni (1995), 173-174.

<sup>63</sup> Pedroni (1995), 175.

<sup>64</sup> Suetonius, *Domitian* 7.

<sup>65</sup> Pedroni (1995), 176.

were on the British antiquities market in 1995. To my knowledge, his hypothesis has not been fully developed in a subsequent article or monograph. His argument hinges on explaining the emergence and disappearance of these *tesserae*. Pedroni admits that the lack of knowledge about Marius' and Domitian's reforms means that his can be only a working hypothesis.<sup>66</sup> Even so, it is unconvincing. He does not fully explain how he envisions these *tesserae* functioning within the *castra*. Moreover, there are three *tesserae* which name a female owner.<sup>67</sup> Finally, the two *tesserae* he published are made from bone. He does not even acknowledge that there are ivory examples. The expense of importing ivory would surely be prohibitive for soldiers along the frontier. While I can imagine Pedroni envisioning that the *tesserae* were made in workshops prior to a banker going to the camp, how would this have been arranged? In short, Pedroni's working hypothesis focuses on the emergence and disappearance of the *tesserae* without considering the logistics, names, or materials used.

Lastly, Alessio Cinti, in an article about a *tessera* from Ostra (inland from Ancona), draws several parallels between the incised decoration on Herzog's *tesserae* and other categories of *instrumentum domesticum*, particularly terracotta discs from Tarentum and stamped amphora handles from the Eastern Mediterranean. While there are examples from Tarentum's corpus of terracotta discs that include similar iconography, these seem to be Hellenistic in date (4<sup>th</sup>-2<sup>nd</sup> century BCE). Thus, while geographically close, they are not of the same period as Herzog's *tesserae*. In any case the function of the terracotta discs is debated, and most hypotheses associate them with religious functions.<sup>68</sup> Cinti argues that the Tarentum terracotta discs are

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<sup>66</sup> Pedroni (1995), 176.

<sup>67</sup> Cat. 102, 107, 128.

<sup>68</sup> Wuilleumier (1932), 26-27.

comparable to Herzog's *tesserae*: they often have two holes and a personal name inscribed. However, the discs have an abundance of imagery and resemble the iconography of coinage rather than Herzog's *tesserae*. They are therefore an imperfect parallel.

Cinti notes that stamped amphora handles include images symbolizing their point of origin. Handles from Rhodes may have palm leaves, dolphins, tridents, or crowns, while amphora handles from Knidos are stamped with altars, tridents and the caduceus.<sup>69</sup> Thus, the images on Herzog's *tesserae* could point to their place of origin. Cinti, following Herzog, argues for the association of the images on the *tesserae* with symbols associated with the patron deity of *collegia* on Delos: Neptune – trident and dolphin, Delian Apollo – altar, crown and palm leaf, Zeus – lightning bolt.<sup>70</sup> Angela Donati went a step further in her discussion of *tesserae* from Rimini. She argued that tridents could be the symbol of *nummularii* themselves, not a deity.<sup>71</sup> However, if the symbols on Herzog's *tesserae* were in fact meant to pay homage to patron deities of the *collegia* on Delos, it is curious that none have been recovered in excavations on the island.

Cinti's proposed parallels with stamped amphora handles and the Tarentum terracotta discs highlight the potential multiplicity of meanings for these symbols, ultimately undermining the association with *collegia* on Delos. The context of these *instrumenta domestica* informs the interpretation of the symbols on them. The lack of appropriate date and provenience of Herzog's *tesserae* pose problems for this association with merchants on Delos. Perhaps if an association with a deity is to be made, it should rather be with the deity of the temple where goods are

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<sup>69</sup> Cinti (2005), 297; Grace (1934), 194-310.

<sup>70</sup> Cinti (2005), 298; Herzog (1937), col. 1416.

<sup>71</sup> Donati (1981), 146-147: "il tridente potrebbe essere veramente il simbolo del nummulario alle cui dipendenze si trovava il *M. Ullius* che avrebbe svolto le operazioni di controllo."

stored. Herzog's *tesserae* would then have been labels attached to precious items within a temple. This hypothesis and the specific provenience of Herzog's *tesserae* is explored further in Chapter 8.

## Section 2.5 Critiques of Herzog's Identification

While Herzog's *tesserae* continue to be called *tesserae nummulariae*, there are those, such as Philip Kay, who use the term but remain unconvinced by this hypothesis.<sup>72</sup> Yet since Herzog's publications in 1919 and 1937 no one (to my knowledge) has offered an interpretation of these labels as anything but a tool used by financial officials to certify coinage. Moreover, some scholars have used these labels as proxy evidence to argue for increasing financial sophistication and for the financial activities of Roman senators.<sup>73</sup> Kay meanwhile criticizes the use of Herzog's *tesserae* as evidence for financial sophistication; yet at the same time he presents evidence that may lead a reader to agree with Herzog's interpretation.

According to Kay, "the problem with this theory is that there is no corroborating evidence. Even if Herzog is correct, the frequent assumption that these activities related to the activities of bankers is in any case dubious, since a *tessera* has been found that was issued in 94 by an agent of a mining firm [Cat. 2]."<sup>74</sup> At the very least Kay puts forward the most common critique of this identification: both *societates* and individual families are named upon these *tesserae*.

Kay acknowledges that there is support for Herzog's categorization. He notes that Peter Wiseman has found a high proportion of family names that can be associated with moneyers.<sup>75</sup> It

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<sup>72</sup> Kay (2014), 124-126.

<sup>73</sup> E.g., Wiseman (1971), 78-79.

<sup>74</sup> Kay (2014), 125-126.

<sup>75</sup> Kay (2014), 126.

is worth mentioning that this was not in fact Wiseman's own observation. Wiseman clearly acknowledges that Herzog made it, and then he draws upon Michael Crawford's work on Roman moneyers to expand the number of families named on the second side who were connected with financial enterprises.<sup>76</sup> Wiseman's Appendix IV List C at times only cites *tesserae* as evidence of moneyers rather than identifying moneyers named upon the *tesserae*. His prosopography of all individuals named contains a fuller discussion of these identifications.<sup>77</sup> Yet when discussing these family names on *tesserae* and their financial associations, Wiseman says that these families "were all either moneyers themselves *or related to moneyers*."<sup>78</sup> Whether relation to moneyers is sufficient evidence to affirm that these labels were exclusively used by financial officials is an issue revisited in Chapter 8.

Kordula Gostenčnik has offered the most thorough critique of Herzog's theory. However, she acknowledges that his *tesserae* are likely associated with financial enterprises. In her study of the bone *tesserae* recovered at Magdalensberg, she raises several issues with the supposed function of Herzog's *tesserae*. At Magdalensberg, Hellenistic coins, Noric tetradrachms and Julio-Claudian coins were all recovered and so could have been in circulation simultaneously.<sup>79</sup> The question arises whether the *tesserae* certified one or more currencies. Her most telling point concerns the disposal of these *tesserae* (or lack of disposal). To prevent fraudulent inspections, the *tesserae* would have needed to be damaged or disposed of.<sup>80</sup> Some have indeed been damaged, most often with their head or handle missing. On the other hand, this is a rare

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<sup>76</sup> Wiseman (1971), 85 and 199-201.

<sup>77</sup> Wiseman (1971), 205-283.

<sup>78</sup> Wiseman (1971), 85 footnote 4 (my italics).

<sup>79</sup> Gostenčnik (2005), 252.

<sup>80</sup> Gostenčnik (2005), 253.

occurrence.<sup>81</sup> Rather, plenty of them are in pristine condition, and do not seem to have been altered after use to prevent their fraudulent reuse.

## Section 2.6 Spectacle Tickets?

Luciana Jacobelli in her work on gladiators discusses *tesserae* that have numbers inscribed on them. These labels have been interpreted as entry tickets for spectacles, with numbers that refer the user to their seat. These tickets, according to Jacobelli, are “primarily made out of bone.”<sup>82</sup> In her bibliography for “On tickets for entertainment venues” she includes the works of Henzen, Pedroni, *ILLRP*, and Herzog’s 1919 work.<sup>83</sup> However, none of the authors interpret these particular labels as tickets for entry into a theater or amphitheater. Jacobelli’s does not appear to be an isolated association of Herzog’s *tesserae* with entry tickets. During a conversation in 2017 with curators at the Museo Archeologico Nazionale di Napoli, after I showed photographs of Herzog’s *tesserae*, the curators called them theater tickets. Moreover, there is another group of bone objects that has also been identified as entry tickets. These *tesserae* are normally circular with inscribed images related to theater or amphitheaters on the obverse, and a number inscribed on the reverse (Fig. 2.1).<sup>84</sup> The ticket would direct the user to the arcade closest to their seat or would note the precise seat itself.<sup>85</sup>

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<sup>81</sup> Fourteen of 184 examples is not a significant portion of the corpus.

<sup>82</sup> Jacobelli (2003), 34.

<sup>83</sup> *Ibid.*, 118.

<sup>84</sup> They have been discussed mainly by Blanchet (1889), 225-242; Graillet (1896), 299-314; Alföldi and Alföldi-Rosenbaum (1976). Buonopane (2009), 259, mentions “*theatrales*,” *tesserae* that grant entry to events but he does not devote a section to their appearance or dimensions. Futrell (2006), 63-64, remarks on the use of ceramic *tesserae* to indicate the entrance, section, row and seat when attending a show in the Colosseum without providing an illustration of them. Mattingly and Rathbone (2012), “*tessera*,” note that “coin-like *tesserae*” were issued for admissions to games. Bieber (1939), 349-350 and figs. 455-457, publishes images and drawings of Roman tickets made of ivory. However, Sandys (1919), 144, argues that counters made of bone, ivory, or lead with “Alexandrian buildings” and “two numbers, one in Latin and one in Greek” are likely a type of gaming token rather than an entry ticket to a spectacle.

<sup>85</sup> See Fagan (2011), 100-101. Bomgardner (2000), 6, notes that the ticket (*tessera*) would mark the arcade closest to a spectator’s seat. Neither Fagan nor Bomgardner discusses the appearance of these tickets, only the texts inscribed



Fig. 2.1. Ivory Roman theater tickets housed in the BNF. From Bieber (1939), 350, fig. 457.

It is unclear how this identification emerged. The numbers on Herzog's *tesserae* indicate the date, not a seating location. The texts of *tesserae* dating to the Kalends, Nones, or Ides do not include any numbers that could indicate an arcade or seat. The matter of modern naming conventions for ancient tokens, tickets and labels highlights two important issues. First, there is not a clear, distinct term for each category of *tesserae* in antiquity. Second, the similar material, form, and lack of ancient descriptions for how these tokens were used has led to some confusing conflation of terms in the modern scholarship. Placing Herzog's *tesserae* alongside other types of ivory and bone labels can help to distinguish the types from one another.

### Section 2.7 Conclusion

Herzog's hypothesis has remained largely accepted, but is not without its problems. Nothing on the *tesserae* themselves specifically notes that they were used to assay coinage.

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upon them.

There are no pointers to an assessment of quantity or quality. *SPECTAVIT* (“has examined/inspected”) could apply to the inspection of a variety of objects. The question remains: if the *tesserae* were used to certify bags of coinage, which financial officials could use them? A vast group of financiers such as Herzog envisioned seems unlikely, given the limited geographic distribution. Additionally, the manufacturing location (or locations) of the *tesserae* is unknown. The extant examples date from the beginning of the last century of the Roman Republic to the first century of the Principate, a two-hundred-year period which scholars have tried to account for. Of those that can be dated, the earliest is from 96 BCE and the latest from 83 CE. 145 datable examples are nearly evenly split between the Republic (seventy-one examples) and the Principate (seventy-four). So why was this type of *tessera* largely found in Italy and (it seems) utilized just for these 200 years? A further curiosity is the preference for ivory to make them. The use of ivory could suggest that they were utilized for the inspection of luxury items rather than for assaying coinage.

It is clear that new methods of enquiry are needed, ones that seek to consider Herzog’s *tesserae* in the context of wider labeling conventions. Moreover, a reexamination of Herzog’s *tesserae* not merely as inscriptions, but also as objects, offers a viable path forward to understanding how they may have been used in antiquity, and how they are distinct from other ivory and bone *tesserae*.



## CHAPTER 3: AIMS AND METHODS

### Section 3.1 Aims

A primary goal of this dissertation is to create a comprehensive database, with images, measurements, and transcriptions for each known example of Herzog's *tesserae*. This database is Appendix 1. Secondly, through autopsy and photography, I have developed a typology which accounts for changes in the physical shape, decoration, and texts over the period of manufacture (96 BCE to 83 CE). This is possible because 145 examples are securely dated to a year. Thirdly, this dissertation is concerned with how these *tesserae* were used in antiquity.

The main body of evidence is the corpus of 184 rectangular inscribed *tesserae* and the inscriptions preserved upon them. These *tesserae* are located in museums throughout Europe, primarily in England, France, Germany, Austria, and Italy.<sup>86</sup> My corpus also includes those which have been published in epigraphic corpora and in excavation reports that identify finds as *tesserae nummulariae*, as well as unpublished examples which I have identified in museums during the course of my research.<sup>87</sup>

Close physical examination of the objects themselves, together with documentation using standard digital photography (and Reflectance Transformation Imaging where it was permitted),

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<sup>86</sup> I am grateful to curators at these museums for aiding my study: Bibliothèque nationale de France; Louvre; Petit Palais; British Museum; Fitzwilliam Museum (Cambridge, UK); August Kestner Museum (Hannover); Kunsthistorisches Museum (Vienna); Archäologischer Park Magdalensberg; Musei Vaticani; Museo Nazionale Romano: Palazzo Massimo alle Terme (Rome); Museo Nazionale Romano delle Terme di Diocleziano (Rome); Museo Archeologico Nazionale di Aquileia; Museo Archeologico Nazionale di Firenze; Museo Civico Archeologico (Fiesole); Museo Nazionale Romano di Napoli; Museo Archeologico al Teatro Romano (Verona); Museo della Città, (Rimini, Italy); and Museo Civico Archeologico Etnologico di Modena.

<sup>87</sup> Holman (2019), 228-230.

offers clear potential. Evaluation of the level of standardization in the objects' shape, and of the script utilized, may point to whether they were manufactured at one location or many, and for what they were used; traces, if any, that may definitively associate them with financiers should also be sought. Did their physical appearance, script used, or texts change over time? My examination has documented that there were changes, which call for explanation.

### **Section 3.2 Autopsy**

Altogether, to date little attention has been paid to the *tesserae* as physical objects, let alone to what they can reveal about their function and who used them. The texts of approximately 184 examples have been published, yet before my study only about one third of this corpus had been photographed or drawn.

Personal inspection of all Herzog's *tesserae* is needed to confirm whether my typology applies to all extant authentic examples. Furthermore, comparison of Herzog's *tesserae* to other types of *tesserae* utilized throughout the Roman world may help to shed light on their function. Conceivably, cultural preferences dictated their aesthetics and their production. Hence, a close study of the *tesserae* themselves is essential for determining their function and manufacture.

### **Section 3.3 Photography and Reflectance Transformation Imaging**

Herzog's *tesserae* were plagued by issues similar to those affecting other material objects, particularly in the 19<sup>th</sup> and early 20<sup>th</sup> centuries: the divorce of physical aspects of the object from the text inscribed on them. Their texts were initially compiled as *tesserae consulares* in *CIL* Volume I. The Republican examples were republished in *CIL* I<sup>2</sup> and in *ILLRP*. Prior to 1990 images or drawings of only approximately sixty examples were published.<sup>88</sup> Ritschl

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<sup>88</sup> There are primarily photographs of Herzog's *tesserae* from two collections: the Bibliothèque nationale de France (Paris) and the Kestner Museum (Hannover). In 1991, Mlasowsky published all four sides of *tesserae nummulariae* from the Kestner Museum, 80-85.

initially published drawings of forty of his seventy examples in 1864. Jean Babelon published photographs of one side of twenty-four *tesserae* housed in the BNF in 1928.<sup>89</sup> A few additional images were published in *ILLRP: Imagines* (1965) as Figures 338-350. However, eight of the thirteen *tesserae* photographed in the *Imagines* are reproductions of those originally published by Babelon. To provide a more complete inventory, I have endeavored to photograph in color all four sides of all of Herzog's *tesserae* in the collections I have visited in person. These photographs are included in Appendix 1.

I used Reflectance Transformation Imaging (RTI) for the documentation of a few *tesserae*. RTI can provide an interactive 2D image that may reveal subtle markings missed by standard 2D photography.<sup>90</sup> RTI is now widely utilized for studies involving epigraphy, cuneiform, and numismatics. In the study of inscribed Roman objects, it has been particularly useful for analyzing writing, such as on the Herculaneum and Vindolanda tablets. Specifically, I use the approach of Polynomial Texture Maps (PTM).<sup>91</sup> This type of imaging developed by HP Labs in 2000 has been highly effective on bone artifacts.<sup>92</sup> A PTM image is produced by taking multiple pictures under varying lighting conditions with a standard digital camera. Typically a series of 40-80 photographs is taken per object with a separate light source for each photograph, hence capturing the reflectance function of the object at each pixel. The variance in the pattern of light and shade on the object is calculated from the images. Readily available software produced by HP (HP PTM Viewer software for non-commercial use) then combines all these images into a

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<sup>89</sup> Babelon (1928), pl. II nos. 1-24.

<sup>90</sup> RTI is an inexpensive technology, requiring only standard digital photography equipment, but the variation in light source allows subtle surface details to be captured. To be sure, RTI is limited by the magnification of camera lenses and equipment, yet it produces higher resolution images than standard digital photography.

<sup>91</sup> Earl, Martinez, and Malzbender (2010), 2040-2050, provide a useful overview of the technical aspects of Polynomial Texture Maps and the cultural heritage studies that have utilized this technology.

<sup>92</sup> See Newman's (2015), 536-549, study of Mayan worked bones.

single file by using a low order polynomial model.

This technology has enabled me to see any cut marks, striations, pigmentation, and incisions not visible through regular photography or by the naked eye, offering new means to understand the manufacture, use, and secondary reuse (if any) of Herzog's *tesserae*. Moreover, the digital images produced can be manipulated and utilized by other researchers: the lighting and angle of the image can both be adjusted. This digital documentation allows researchers who already have access to the text on a *tessera* to view the object itself.

### **3.4 3-D Printing and Reconstructions**

I have been able to 3-D print examples of *tesserae* in order to test the supposition that the first or third side would be visible when attaching the *tessera* to its object. Predictably, it would not have been permitted to experiment thus with the ancient objects themselves. However, the measurements I took enabled me to obtain the necessary data for 3-D printing.

This 3-D printing to scale has enabled me to test several theories related to the function of Herzog's *tesserae* and their handling: how they were attached to various objects and how securely, and what portions of text would have been visible. Relying on descriptions and archaeological remains of money-purses, I recreated a bag from modern materials. With the diameter of the perforation averaging two mm in diameter, it is likely that these *tesserae* were affixed to an object using a string or possibly a wire. The results of my 3-D experiments are discussed in Chapter 8.

### **Section 3.5 Comparative Approach**

To date, Herzog's *tesserae* have been treated largely as a separate category of object and have thus not been sufficiently contextualized within Roman labeling conventions. Now I draw comparisons between Herzog's *tesserae* and other rectangular *tesserae*, such as *tesserae*

*lusoriae*.<sup>93</sup> Evaluation of other categories of *tesserae* from the Roman world may provide clues to how form might indicate function. I also draw comparisons between the nature of the inscriptions on Herzog's *tesserae* and those on lead *tesserae* to illuminate what information (if any) commonly appears on labels known to have been used for economic transactions. Situating Herzog's *tesserae* in the wider context of Roman manufacture and use of *tesserae* may be expected to shed light on their possible function, regulation, and circumstances of production.

Initially my aim was to compare Herzog's *tesserae* with all types of *tesserae* from the Roman world, such as *tesserae frumentariae*, *spintriae*, and Palmyrene feast tickets.<sup>94</sup> However, their treatment would not be as productive as initially hoped due to differences in material used and in iconography. Accordingly, I adopt a narrower scope, investigating only those types of *tesserae* which are comparable either morphologically or epigraphically. This comparison may elucidate whether inscribed texts correlate to a particular material or form of *tessera*. It can also show whether images and decoration appear on other types of labels, and whether a style of decoration may correspond to a particular type of *tessera*.

I have been able to study tribal *tesserae*, inscribed with an abbreviation of a Roman voting tribe and a number, and *tesserae lusoriae* (gaming *tesserae*) while conducting research on Herzog's *tesserae*. While my material examination of the former is not as thorough as for the latter, the approach is similar. Chapter 7 foregrounds the physical features of gaming and tribal *tesserae* before discussing script, inscriptions, and proposed functions. Additionally, I have been

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<sup>93</sup> *Tesserae lusoriae* are a category of rectangular bone or ivory labels thought to be used as pieces in Roman board games and games of chance: discussion and bibliography of this category is in Chapter 7.

<sup>94</sup> *Tesserae frumentariae* were utilized as identity tokens in the distribution of the *annona* in Rome: Virlouvet (1995); Mattingly and Rathbone (2012). *Spintriae* are typically circular metal tokens displaying erotic images, possibly used for entering brothels: McGinn, (2004), 115, and Duggan (2017), 101-121. For Palmyrene *tesserae* for the sacred feast, see Ingholt (1955).

able to map the distribution of each type. The distribution patterns can elucidate where each type was used, and how each type could have influenced others. This geographic approach is limited, but it can show where the use of different types of labels overlaps.

I also consider the use of stamps, seals, and security devices used in the Roman economy, particularly for transport. This comparison of seals and labels on commodities, including money, that would have been transported in bags or crates shows what materials were available to serve a similar function to the proposed use of Herzog's *tesserae*. This approach illuminates how his *tesserae* may have functioned as a security device when considered alongside physical security devices on transported goods. Again, the question arises: do the texts on Herzog's *tesserae* remain unique once other materials are investigated? Was certain information conveyed on a particular material?

### **Section 3.6 Conclusion**

My methodologies achieved varying levels of success, as will be explained in Chapters 5-8. Autopsy of Herzog's *tesserae* and digital photography have yielded the greatest benefits for creating my up-to-date catalog. Autopsy has resulted in new readings of a few inscriptions. My methods have also been instrumental in the development of the typology discussed in Chapter 5. Autopsy has shown physical variations in the corpus which have till now largely escaped notice. Discussions of Herzog's *tesserae* have centered on the unique textual formula that made this category distinctive from other bone and ivory tokens. My conclusions, however, reveal other distinctions.

My dissertation departs significantly from previous studies of Herzog's *tesserae*. Rather than discussing them separately or only within the context of Roman banking, I have set them in conversation with other bone and ivory labels, as well as with ancient sealing practices. In this

way, this dissertation can contribute to the wider understanding of Roman labeling practices, as well as ivory and bone craftsmanship.

## CHAPTER 4: CATALOG OF HERZOG'S ROMAN *TESSERAE*

### Section 4.1 Introduction

The catalog in Appendix 1 is a database of the physical features and texts of Herzog's *tesserae*. It supersedes all previously published catalogs. As noted in Chapter 3, most publications to date have privileged the texts over descriptions and illustrations of the objects. Until now, the most recent catalog of the entire corpus is Herzog's published in 1937, with 145 examples. In 2018, Patrizia Calabria and Francesco Di Jorio published a catalog of the texts of 149 examples. This was less than the number Andreau had claimed in 1987, between 150 and 160 genuine examples.<sup>95</sup> Calabria and Di Jorio do include an additional sixteen examples in a second table, all lacking the verb *SPECTAVIT*. Calabria and Di Jorio therefore doubt the authenticity of the sixteen.<sup>96</sup>

Catalogs of the inscriptions have generally included a brief description of the physical objects. However, publications of images alongside the texts of these *tesserae* have been rare. It is most common in museum catalogs, but these seldom publish photographs of all four sides.<sup>97</sup> If plates of drawings or photographs are included with the texts, such visual material comes as separate plates at the end of a volume or even in a separate volume (as was the case for Ritschl's 1878 plates). Images are also uncommon in online epigraphic databases. Thus, my catalog

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<sup>95</sup> Andreau (1987), 488.

<sup>96</sup> They include four *tesserae* found at Magdalensberg and two from Rimini: Calabria and Di Jorio (2018), Tab.2 D11-16.

<sup>97</sup> See, for example, Babelon (1928), pl. II. The *tesserae* from the Kestner museum are published with black and white photographs of each side: Mlasowsky (1991), no. 174-182.



departs from its predecessors by offering descriptions of the physical features, color images when available, and presentation of the texts on each side in a single entry. This approach is part of a larger trend in scholarship relating to material culture, one which seeks to rectify the divorce of text from object.<sup>98</sup> To understand the strengths and limitations of my catalog, the methods used to assemble it and its organization are outlined below.

## Section 4.2 Methodology

My research began in 2016 with compiling the texts of all reported examples of Herzog's *tesserae*. I started with his two catalogs (1919, 1937), Degrassi's Republican examples, and those published in *CIL* I and I<sup>2</sup>.<sup>99</sup> From Andreau's publications, it was clear that by 1987 the number of known *tesserae* had increased to approximately 160 since Herzog's 1937 catalog. However, Andreau did not publish a catalog of the entire corpus. A new catalog of all known examples was not published until 2018, the work of Calabria and Di Jorio mentioned above.<sup>100</sup> For examples published since *ILLRP* in 1963, I turned to *L'Année Épigraphique* (1965-2013) and excavation reports published online.<sup>101</sup> I checked online epigraphic databases, such as the Electronic Archive of Greek and Latin Epigraphy (EAGLE), Epigraphic Database Roma (EDR), and Epigraphik Datenbank Clauss/Slaby, to ensure I had cataloged all recently published *tesserae*.

Once I had identified the corpus of approximately 170 known examples, I contacted

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<sup>98</sup> See Trimble's comments in her study of Roman slave collars: the "anachronistic divide between text and object continues to shape the scholarship" and hampers the use of material culture as a lens for understanding slaves' lives (2016), 449; Some notable exceptions are Elsner (1996), 1-6; D'Ambra and Métraux (2006); Petrovic et al. (2019), especially part II.

<sup>99</sup> *ILLRP* (1963), no. 987-1062; *CIL* I (1863), no. 717-776 and suppl. 776a-cc for dubious examples. *CIL* I<sup>2</sup> (1918), no. 889-951.

<sup>100</sup> Calabria and Di Jorio (2018), Tab. 1 and 2.

<sup>101</sup> *Tesserae* recovered from recent excavations in Gabii, Italy and Agrigentum, Sicily were published in online excavation reports. Gabii: Glisoni et al. (2017), 26. Agrigentum: Belfiori (2019), 11-14.

museums listed as the last known location for each of these *tesserae*. Entries in *CIL* and *ILLRP* were notably useful for this purpose. Searches for *tesserae nummulariae* also led to museum catalogs of Herzog's *tesserae*, including the collection in the Kestner Museum.<sup>102</sup> In some instances, predictably the information from *CIL* I<sup>2</sup> or *ILLRP* was outdated. For example, Cat. 34 was in the Uffizi Gallery when Degrassi published the Republican examples.<sup>103</sup> When I contacted the Uffizi Gallery, the *tessera* was no longer housed there. I was advised that it had likely been moved to the Museo Archeologico Nazionale di Firenze. In fact, it had been, and I was able to see it there. There remain some *tesserae* I have been unable to track down even with the information about the last known location.<sup>104</sup> There are also examples in private collections which I was unable to locate.

I did not have time to visit some museums that housed only one example.<sup>105</sup> To maximize my chances of studying a significant portion of the corpus, I identified museums that housed at least five examples: the British Museum and the Petit Palais during one trip (2016), and the Kestner Museum and Bibliothèque nationale de France, Paris (BNF) on my next trip (2017). Between these four museums, I studied 70 *tesserae* (38 % of the corpus). While I was in London and Paris, I took advantage of my proximity to nearby museums with smaller collections of *tesserae*. The Fitzwilliam Museum in Cambridge has one published and two previously unpublished examples.<sup>106</sup> The Louvre in Paris has three (all published). The visit to the Louvre afforded me the opportunity to study other types of bone and ivory *tesserae* in its

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<sup>102</sup> Mlasowsky (1991), 27-32 and no. 174-182.

<sup>103</sup> *ILLRP* 1032.

<sup>104</sup> In a few instances, I never received a response from the museum approached.

<sup>105</sup> Cat. 63 located in Aix-en-Provence, France; Cat. 83 located in Sousse, Tunisia; Cat. 90 in Izmir, Turkey.

<sup>106</sup> Holman (2019), 228-230.

collection for comparison.

When I visited each museum, I did not consult my catalog of texts on the *tesserae*. Instead, I read each inscription independently, recorded measurements of the text, the body, the head and the perforation. With permission of the museum, I took high resolution photographs of each side of each *tessera*. At the Kestner Museum and in Verona, I was able to use Reflectance Transformation Imaging on a few *tesserae*. Because this type of imaging uses flash photography, I was not permitted to use this technique at many museums.

### Section 4.3 Description of Catalog

Chapters 5 and 6 are designed to be read in conjunction with Appendix 1: Catalog of Herzog's Roman *tesserae*. The numbering is my own and by year, beginning with the earliest dated example from 96 BCE. I consulted Cooley's reconstruction of the consular *fasti* for dating the *tesserae* naming consuls.<sup>107</sup> Each *tessera* is designated with the shorthand "Cat. #" throughout the dissertation. There are 145 *tesserae* (Cat. 1-145) in the catalog which have a legible consular date. Following these, Cat. 146-161 are those examples which I consider genuine, though impossible to date to a specific year. All of them are inscribed with personal names and *SPECTAVIT* (or an abbreviated form of the word). On Cat. 146-151 the consuls' names either cannot be read or were never inscribed. The texts of Cat. 152-157 include personal names but no date; instead, some have additional incised decoration on the other sides.

Cat. 162-170 are examples found during excavations at Magdalensberg. Cat. 171-178 are examples which have been considered Herzog's *tesserae*: they have personal names inscribed, but there is nothing else on them characteristic of his *tesserae*. Cat. 179 is morphologically similar to Herzog's *tesserae*, but so badly damaged that the inscriptions are illegible. Cat. 181-

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<sup>107</sup> (2012), Appendix 1, 449-487.

184 are a group found at Ariminum (Rimini, Italy), discussed in detail in Chapter 5.

Each entry in Appendix 1 begins with the specific date of the *tessera*. For those dated to the Kalends, Nones, or Ides, I give the corresponding modern date in parentheses following the Roman date. After the date, the current location of the *tessera* is given; the museum's registration number, if any, is included in parentheses. If the current location is unknown or the *tessera* is presumed lost, this is noted. Findspot is the next line of the entry, signifying the specific provenience of the *tessera* (when this information is recorded) or the earliest reported location of it. Where the location is not the original location of the *tessera*, the entry starts "once in" followed by the reported location and bibliography. The specific provenience of many examples was not reported, and for others only the city or town where it was found.

The physical aspects of the *tessera* are then recorded, beginning with its material. The identification of the material is mine for those examples I have examined. In certain instances, I am unsure of the material because of the condition of the *tessera*. I denote this uncertainty with a question mark following the material, or I resort to "bone/ivory". For those which I have not examined, I list relevant bibliography for the material; sometimes this was never reported. Measurements for the height, length, width, diameter of the perforation and height of the text follow; again, I can only vouch for accurate reporting where I have examined the *tessera*.

Images of all four sides are included when available. I have taken all photographs in Appendix 1 unless a credit for the photographs is stated. In some instances, I include the only available photographs I have of the *tesserae*. Some *tesserae* had to remain on display under glass; hence photographs of them are not of the highest quality. In the interest of creating the fullest catalog possible, I include them nonetheless. If photos are not available, I include the

drawings published by Ritschl if there be any.<sup>108</sup> In the few instances where I have both photographs and drawings, the drawings follow the photographs. There are forty-two examples for which I can find no published image. These are, in particular, examples untraceable or presumed lost.

The text on each side follows the images. Appendix 1, unlike the tables of Herzog, does not attempt to display each component of the inscription (inspector, owner, abbreviation of *SPECTAVIT*, date, and consuls) separately.<sup>109</sup> The entry reflects the texts as they were inscribed from the first through the fourth side. I provide my own reading of the texts when possible. Otherwise, I reproduce the reading of the text presented in *CIL*. The text appears in all capital letters, and interpuncts are represented by periods. When a damaged text can reasonably be reconstructed, I include the text in square brackets. Whenever a text cannot be reconstructed, I include ellipses to denote where text is missing.

The entry ends with relevant bibliography. References are presented in order of publication from earliest to most recent. I do not attempt to provide a comprehensive bibliography for each *tessera*, but cite only the most important contributions to discussion of the text or physical features. I reference publications of the *tesserae* in *CIL*, Herzog's 1937 catalog, and *ILLRP* most frequently. *CIL* I<sup>2</sup> numbers 889-951 were published in the first fascicle of the revised edition (1918), numbers 2517 and 2663a-c were published in the second fascicle (1931). 2713-2718 were published in the third fascicle (1943). I cite an earlier bibliographic reference if it provides information relevant to this catalog that is omitted from the other

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<sup>108</sup> Ritschl (1878b), Taf. XX-XXII.

<sup>109</sup> Herzog (1919), Tab. 1; Herzog (1937), col. 1422-1434, Tab. 1. Di Jorio and Calabria's up-to-date table includes Herzog's categories as well as columns for each side of the *tessera*. This format, however, has led to inaccuracies for *tesserae* which do not follow the typical layout, giving the impression that this category of labels is extraordinarily formulaic. Calabria and Di Jorio (2018), Tab 1. Cf. Tab.1 n. 9-12.

references.

#### **Section 4.4 Conclusion**

Over the course of my research, I studied 110 *tesserae* in eighteen museums across Europe. I have taken or reproduced photographs of all four sides of 115 examples. In the catalog, 121 entries have at least one photograph of the *tessera*. There are twenty-one *tesserae* which were only drawn during the 19<sup>th</sup> century and published by Ritschl in 1864 and 1878. I have used his 1878 plates because these include a few additional examples. There are forty-two examples for which I have not found a photograph or drawing. Therefore, the catalog presents an image for approximately 77% of published examples. Although in this respect my catalog is incomplete, it is by far the fullest record currently available for the texts, measurements, and images of this category of *tesserae*.

The dissertation is meant to be read in close conjunction with the catalog. In Chapters 5 and 6, it will serve as an illustration of the developments over time in the form and inscriptions discussed. I refer to Herzog's *tesserae* throughout by the number in my catalog. I do not include images of them in the main text, but provide a reference to the catalog entry.

## CHAPTER 5: A TYPOLOGY OF HERZOG'S ROMAN *TESSERAE*

### Section 5.1 Introduction

Chapters 5 and 6 – both technical, inevitably – seek to determine the extent to which the physical layout of Herzog's *tesserae* mirrors the standardization of the inscribed texts. This chapter 5 charts the chronological development in the form, size and layout of the *tesserae*, summarized in Table 5.4. I describe the significance of the material used and the general trend in physical features, before turning to notable anomalies. This chapter relates closely to Appendix 1, which presents the material, measurements, and images of each *tessera* so far as possible.

As noted in Chapter 1, ninety-nine percent of Herzog's *tesserae* are rectangular in section.<sup>110</sup> 141 of the 181 rectangular *tesserae* have inscribed text on all four sides; however, there are notable variants with additional decoration in place of text on one or more sides.<sup>111</sup> The exact location of the perforation and the shape of the head both appear to vary according to the period in which the *tessera* was made. Andreau has argued that all examples from a given period have identically shaped heads.<sup>112</sup> This is true for the Republican examples I have examined, but the Principate examples yield a variety of head shapes and sizes. Aside from the head, the only decorations are incisions at the top and bottom of the body, or in some cases a rectangular box, to form a border around the inscription on each side. What then do *tesserae* which bear additional

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<sup>110</sup> For the three hexagonal *tesserae*: Cat. 76 dated to 25 BCE, 120 dated to 24 CE, 131 dated to 42 CE.

<sup>111</sup> Cat. 3 has decoration, but no text on the second side. Cat. 152-157, 160, and 161-179 are undatable examples which intentionally used only two or three sides for text.

<sup>112</sup> Andreau (1999), 85. Andreau (1987), Fig. 19 and 20 are published images of six *tesserae* housed at the BNF. All six are Republican examples: Cat. 27 (62 BCE), 28 (62 BCE), 30 (61 BCE), 55 (52 BCE), 58 (51 BCE), 62 (48 BCE).

decoration – such as inscribed palm leaves, dolphins, and altars – suggest for their use and reception? An analysis of the form throughout the nearly 200-year period in which the *tesserae* were made may elucidate what portion of the text was meant to be emphasized.

Even though the *tesserae* bear so few decorative elements, at least 44% are made of ivory. This suggests that the importance of the label called for an expensive material, rather than readily available bone or even lead. Or did those who commissioned the manufacture of these labels believe that ivory, as a material, lent itself to their structural integrity?

## Section 5.2 Material

The preference for ivory to produce these labels raises the question: are there structural qualities of ivory that advocate for this use? In many ways bone is a superior material to ivory. Due to the composition of bone, notably the collagen, it is hard but also elastic, making it easier to carve than ivory.<sup>113</sup> As a raw material, bone is far more accessible and readily available than ivory.

Ivory is a more delicate material. It differs from bone in that it lacks blood and nerve canals, and thus produces a layered structure (*lamellae*- layers of lamination).<sup>114</sup> While ivory develops a beautiful shine when handled, too much exposure to oils on human skin can darken the color, to even as dark as brown.<sup>115</sup> Ivory is inherently more delicate than bone, with a tendency to delaminate (separate into layers) over time, and it is especially vulnerable to changes in temperature. These changes can affect the color and chemical composition. When exposed to high heat, ivory can become gray-blue, brown or black.<sup>116</sup> This susceptibility to heat is

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<sup>113</sup> Ayalon (2005), 5.

<sup>114</sup> *Ibid.*

<sup>115</sup> Pedersen (2004), 72.

<sup>116</sup> Ayalon (2005), 5-6; Kryzyszkowska (1990), 36.



evidenced in the corpus of Herzog's *tesserae* with a few examples apparently darkened after exposure to fire.<sup>117</sup> Meanwhile, bone – typically the waste from butchered animals, particularly cattle, sheep and goats – has greater elasticity and therefore greater resistance to fractures and cracking. Bone is a “poor conductor of heat,” and its color does not change when exposed to high heat.<sup>118</sup> The inherent strengths of bone over ivory are evident from the ivory and bone remains of a Roman carving workshop from the Palatine East excavations, among which a great number of utensils were bone rather than ivory, presumably due to its superior characteristics.<sup>119</sup> Thus, it would seem that ivory was selected for its aesthetics and status as a luxury item, rather than for its structural integrity.

In Roman literature, bone is rarely mentioned as a resource for crafts. When ancient authors discuss bone as a raw material, it is only noted for its utilitarian purposes. Pliny the Elder (*NH* 8.4) does remark that bone could be used to produce luxury goods, but only as a last resort.<sup>120</sup> Ivory is referred to more often, not only as a material, but also in discussions of the trade of ivory as a luxury commodity. There are frequent references to individuals hoarding it in tombs and temples. Plutarch remarks that Cleopatra hoarded ivories alongside jewels and other luxury commodities for her tomb.<sup>121</sup> Interestingly, some of Herzog's *tesserae* with a specific provenience indeed have been found in tombs and temple complexes, but these examples tend to be made of bone, such as that from Mutina (modern Modena, Italy).<sup>122</sup>

The availability of ivory evidently fluctuated over time. It was abundant in the 3<sup>rd</sup> century

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<sup>117</sup> *Observe Cat.* 22, 32 and 37.

<sup>118</sup> Pedersen (2004), 87.

<sup>119</sup> St. Clair (2003) 1-2.

<sup>120</sup> St. Clair (2003), 7.

<sup>121</sup> Plutarch, *Antony* 74.2.

<sup>122</sup> *Cat.* 85.

BCE and rare during the 1<sup>st</sup> century CE.<sup>123</sup> And yet, despite the cost to import it and the limited supply, there seems to have been a demand to produce these labels in ivory rather than bone. Nearly 45% of the corpus is made from ivory, although recent excavations have tended to report that examples were made of bone rather than ivory. At times, it can be difficult to differentiate between bone and ivory when a *tessera* has been polished. Even so, the significant presence of ivory in the corpus would suggest that these labels were intended for a prestigious purpose.

### **Section 5.3 Typology**

Herein follows a typology of the form, size, and layout of Herzog's *tesserae*. There are three main types. I have also separated out two groups: one of nine *tesserae* from Magdalensberg, Austria, and one of four found at Ariminum (modern Rimini, Italy). These groups are morphologically distinct, the layout of the texts differs from the main types, and the material is bone rather than ivory. The differences between these groups and types are compared in Table 5.4. I reserve a full discussion of the texts, their significance and variations, until Chapter 6.

#### Section 5.3.1 Type 1 (96-93 BCE)

From the two examples (Cat. 1 and 2) I have studied and the drawing of Cat. 3, this form appears to be utilized during the 90s BCE.<sup>124</sup> It has quite a short period of manufacture, compared to the subsequent types. Yet the unique decorative features of this initial period of manufacture are significant for assessing how the design evolves over time, especially because the features are adapted on later examples, possibly to emphasize certain portions of the inscribed text. Autopsy of all extant early Republican examples from the 90s and 80s BCE is

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<sup>123</sup> St. Clair (2003), 8; Pliny, *Natural History* 8.4.

<sup>124</sup> I studied Cat. 1 and 2 in person at BNF. Cat. 3 is now lost. However, Garrucci (1877), Tab. II no. 7, published a drawing of all four sides.

needed to determine how long this form persisted, and to establish whether there is an overlap in the period of use between Type 1 and Type 2.<sup>125</sup> The features of this type may also shed light on production periods for examples which lack consular dates.

Until recently, the best impression of the form, layout, and decoration of this early phase came from photographs published by Babelon of examples from the Bibliothèque nationale de France (republished by Attilio Degrassi).<sup>126</sup> This impression is inadequate, however, because only one side of the *tessera* was photographed (Fig. 5.1). What emerges clearly from the photograph is that the type has a circular head. Based on the photograph, it could be assumed that the double incised border around the text of the first side is continued on all four sides. This is not the case, however. The border only appears on the first and third sides.

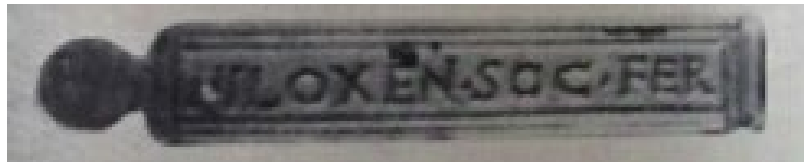


Fig. 5.1. Photograph of the first side of Cat. 2 from Babelon (1928), pl. II no. 22.

I was able to take photographs of all four sides of Cat. 1 and 2, dated to 96 and 94 BCE respectively. Because there is a border of double incisions around the text on *only* the first and third sides, the purpose is presumably to emphasize the texts here. Additionally, the decorative border reduces the space available on the *tessera* for labeling, and so the text on the first side fills the entire space available. On the second and fourth sides, the inscriber centered the text. This type typically has its hole drilled through the neck or the base of the head, from the second side through to the fourth side.

Taken together, the placement of the hole and the additional decoration around the first

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<sup>125</sup> I have not been able to study or examine images of Cat. 4 (86 BCE) and 6 (80 BCE) to determine the specific chronology and possible overlap of the first two types.

<sup>126</sup> Babelon (1928), pl. II no. 22. Degrassi (1965) no. 341.

and third sides suggest that these are the sides meant to be seen when the label is attached to its object. From the similar location of the perforation and placement of the inscriptions on other rectangular bone and ivory *tesserae*, it is clearer still that the first and third sides were intended to be visible.<sup>127</sup> Notably, none of the Type 1 examples has the pattern of inscriptions which would become common in subsequent decades.

Cat. 1 has both names inscribed on the first side, the month labeled on the second side, the consuls are named on the third, and only the abbreviation *SPECT* on the fourth side. Cat. 2 is similar in its incised decoration and content of the inscriptions. However, the text is laid out on the four sides in a completely different way. On its first side, Cat. 2 has a name in the nominative and the abbreviation *SOC.FER*, presumably for the *societas* of iron workers. It is one of only three *tesserae* that name a *societas* rather than an elite Roman family.<sup>128</sup> Then the consuls' names are inscribed on the second side. The entire word *SPECTAVIT* is displayed on the third side, while the fourth side lists a day and month (the *nonas* of April).

Cat. 3 has a slave's name, the Roman family in the genitive, and the abbreviation *S* for *servus* on the first side. The second side has decoration. There is no month or day inscribed. *SPECTAVIT* occupies the third side, as on Cat. 2. The names of the consuls are on the fourth side.

The three *tesserae* were produced between 96 and 93 BCE. The form is consistent, all three having a circular head, double incised borders on the first and third sides, and single incisions at either end of the second and fourth sides. Nonetheless, a uniform layout of the inscriptions has not yet been developed. Cat. 1 and 2 are similar in size measuring 46 and 43 mm

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<sup>127</sup> See further Chapter 7.

<sup>128</sup> The other two examples which name a *societas* are Cat. 105 and 156.

long, 9 and 7 mm wide, and 8 and 6 mm tall, respectively. There is no record of the dimensions of Cat. 3. A feature common to the three examples is the placement of both (non-consular) names on the first side. It appears in this case that the first side was the one intended to be displayed, not the third.

### Section 5.3.2 Type 2 (80s-42 BCE)

The Republican examples datable from at least 85 BCE through 42 BCE (Type 2) do not differ markedly in shape from Type 1.<sup>129</sup> The earliest Type 2 example (Cat. 5) dates to 85 BCE.<sup>130</sup> The latest dated Type 2 example may be from 42 BCE. The drawing of one side of Cat. 69 (42 BCE) has the characteristic features of this type. The other two examples dated to 42 BCE (Cat. 68 and 70) have atypical features (discussed below).

Like Type 1, these *tesserae* too have a circular head with a distinct neck. In contrast, however, the heads of Type 2 appear to be much shorter and slightly wider, more of an oval shape than a circle. A further (slight) difference between Types 1 and 2 is that there is no longer an incised rectangular border along the first and third sides, but rather an incised line at both ends of the body on all four sides of the *tessera*, delineating the area within which to label it.<sup>131</sup> The additional decoration is eliminated in this later period, presumably as more *tesserae* are being made. Type 2 examples also have the perforation from the second side through to the fourth side on the neck or head, both of which are narrower than the body of the *tessera*. On these *tesserae*,

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<sup>129</sup> Whether Cat. 4 is also reflective of Type 1 is unknown at present.

<sup>130</sup> This is the earliest dated example I have seen. Drawings of all four sides are published in the *British Museum Exhibition Guide* (1920), fig. 60. Cat. 5 is on display in the British Museum and I was not permitted further access when I visited. In the British Museum's online catalog, it is called a "banker's tally" not a *tessera*: [https://www.britishmuseum.org/collection/object/G\\_1814-0704-1080](https://www.britishmuseum.org/collection/object/G_1814-0704-1080).

<sup>131</sup> 35 *tesserae* fit this description: Cat. 5, 9, 10, 12, 13, 18, 19, 20, 21, 22, 23, 24, 27, 29, 30, 32, 33, 34, 35, 36, 37, 40, 43, 45, 47, 48, 49, 50, 51, 55, 58, 61, 62, 65, 69. Another five *tesserae* could be Type 2 examples but they are missing a head: Cat. 8, 16, 41, 42, 53. There are seven examples that date to this period that have more or less decoration than the standard type. These examples are discussed below in Variant Types.

the inscriptions are typically justified to the left on each side, rather than centered.

Type 2 examples are quite consistent in length, typically measuring between 40 and 50 mm (averaging 44.5 mm).<sup>132</sup> There is a wider variety of lengths in Type 2 than Type 1 (to be expected with more examples). The shortest example is 26 mm and the longest is 52 mm.<sup>133</sup> The median length for Type 2 examples is 45 mm. Type 2 examples are square in section, slightly wider than they are tall (averaging 8.69 mm wide and 6.8 mm tall).

<i>Type 2 Examples</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Average</i>	<i>Median</i>
Length	26 mm	52 mm	44.5 mm	45 mm
Width	7 mm	11 mm	8.69 mm	9 mm
Height	5.5 mm	11 mm	6.83 mm	7 mm

Table 5.1 Measurements of Type 2 examples.

With Type 2, a textual formula emerges in which the abbreviation *SP* supplants *SPECT* or the entire word *SPECTAVIT*. This simplification to a standard textual format mirrors the simplification of the incised borders on each side. This form has several parallels among other Roman labels, most directly with the ivory and bone *tesserae* called tribal and *lusoriae*. The physical similarities between these three types of labels are discussed in Chapter 7.

### Section 5.3.3 Type 3 (27 BCE-45 CE)

There is a notable gap in dated examples between 42 BCE and 33 BCE, a period of civil wars. There is one example dated to 33 BCE (Cat. 71), which I have not been able to examine; there are no photos or drawings of it. Hence, it is impossible to say what kind of transitional state

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<sup>132</sup> Calculations are based on the 31 examples that I have examined. Calculations for length include the measurements for three additional *tesserae* (Cat. 5, 19, 40).

<sup>133</sup> Cat. 50 is 26 mm long and Cat. 60 measures 52 mm.

it represents in the emergence of a new form by 27 BCE. Cat. 72-74 are representative of Type 3.<sup>134</sup> The latest dated example of the type is Cat. 135 (45 CE). Further possible examples of the type are Cat. 97, 130, 137, 138, and 145, but the loss of their heads prohibits secure identification.

Type 3, which I date from 27 BCE to at least 45 CE, is still rectangular in section with a head on one end. The head is no longer circular, but squat and trapezoidal. The perforation is no longer through the neck or head, but at the top of the body. This trapezoidal head, with a shape that does not resemble any other type of *tessera* I have observed, is therefore purely decorative. The change may suggest a desire to increase the security of the *tessera*'s attachment to its object, or perhaps to physically differentiate it from other parallel types (see Chapter 7). The necks of Type 2 examples are quite narrow, measuring less than 5 mm across. However, the width of the bodies of Type 3 is typically 11 mm (Table 5.2).<sup>135</sup> The added breadth of the hole would make the *tessera* less liable to break when attached to an object.

Perhaps, given the tumultuous civil wars after Caesar's assassination, there is greater concern for security during the Principate, but that is merely speculation based upon the dates of the examples I have been able to examine. Study of the example from the 30s BCE may advance understanding of when the change to the new form occurred. Additionally, study of Type 3 is complicated by the many examples which do not have their heads preserved. There may in fact have been multiple types in this same period.

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<sup>134</sup> As are Cat. 80, 89, 92, 93, 94, 95, 96, 98, 99, 100, 101, 102, 105, 106, 107, 108, 110, 111, 112, 113, 114, 115, 116, 117, 118, 121, 122, 123, 125, 127, 133, 134. Cat. 149 and 151, although not naming the consuls, also resemble the form of Type 3.

<sup>135</sup> Calculations are based upon the 42 examples which I have studied that date between 25 BCE and 88 CE.

<i>Type 3 Examples</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Average</i>	<i>Median</i>
Length	24 mm	65 mm	48 mm	49 mm
Width	8 mm	15 mm	11 mm	11 mm
Height	6 mm	10 mm	7.2 mm	7 mm

Table 5.2 Measurements of Type 3 examples.

However, while Type 3 spans the period between 27 BCE and 45 CE, there is more variation. Such physical and textual variations are not present on more than two examples, so they hardly constitute a new type. I consider them in the physical anomalies section below. To be noted when examining the chronology of Type 3, Cat. 75-79 (dated from 25 to 21 BCE) do not fit this type, nor do they resemble Types 1 and 2. There are Type 3 examples between 26 and 14 BCE; however, Type 3 seems to emerge more consistently beginning in 6 BCE. There are also variations toward the end of the first century CE. Thus, while Type 3 appears between 27 BCE and 45 CE, it is not as consistently adopted as the earlier Types 1 and 2.

#### Section 5.3.4 Magdalensberg Group

During excavations from the 1950s through the early 2000s at modern Magdalensberg, Austria, in the Roman province of Noricum, a total of eleven burnished bone *tesserae* identified as *tesserae nummulariae* has emerged to date. Nine are morphologically similar to Types 1 and 2. They have personal names inscribed on the first, and sometimes the third, sides.<sup>136</sup> Degrassi included two in his collection of Republican inscriptions.<sup>137</sup> While these examples have an exact provenience, they lack a specific date. None names a pair of consuls. They were also recovered

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<sup>136</sup> Cat. 162-170.

<sup>137</sup> *ILLRP* 988 and 992.



from mixed layers. However, the site itself was occupied from the mid first century BCE to the mid first century CE.<sup>138</sup>

Two of the eleven lack inscriptions and perforations, which is why I omit them from my catalog; both have anthropomorphic heads (Fig. 5.2).<sup>139</sup> The left-hand *tessera* in Figure 5.2 is comparable to the female head on Cat. 75 (discussed below). Neither *tessera* has a perforation by which to attach it to any object. Evidently neither was ever inscribed, since there is no sign that a previous inscription has been removed or written over.<sup>140</sup>

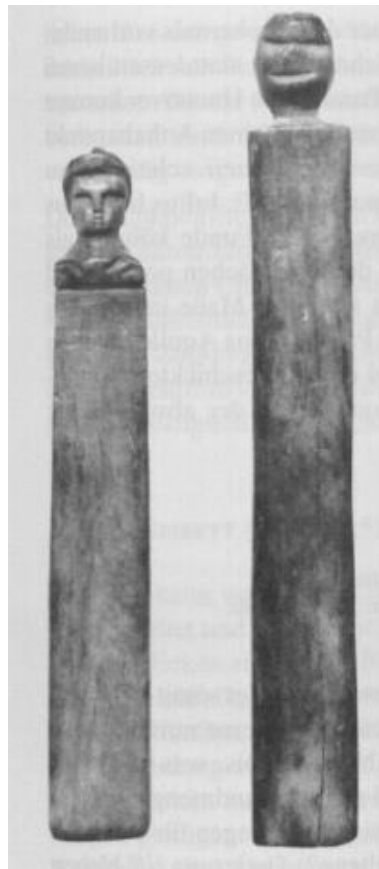


Fig. 5.2. Two uninscribed “*tesserae nummulariae*” from Magdalensberg with anthropomorphic heads. Reproduced from Gostenčnik (2005), Abb. 39.

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<sup>138</sup> Gostenčnik (2013), 60-62.

<sup>139</sup> Gostenčnik (2005), 258-261 and Tafel 60, 3-4

<sup>140</sup> So observes Gostenčnik (2005), 260.

The other nine in the Magdalensberg group differ from Types 1-3 in both their texts and material, which is bone rather than ivory. The lengths and widths of these nine fall in between those of Types 2 and 3 (Table 5.3). Presumably because text is inscribed on only one or two sides, the average height of the Magdalensberg group is shorter than Types 1-3. Four of the nine *tesserae* are only inscribed on the first side, one naming an individual with *tria nomina* (Cat. 166).<sup>141</sup> The remaining five of the nine have text on the first and third sides.<sup>142</sup> Three *tesserae* have additional decoration on the second and fourth sides (Cat. 162, 165, 169). There is never the abbreviation *SP*, nor a date, nor names of consuls. Thus, whether the Magdalensberg group should be considered as among Herzog's *tesserae* is questionable.

<i>Magdalensberg Group</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Average</i>	<i>Median</i>
Length	49 mm	57 mm	52.5 mm	54 mm
Width	8 mm	12 mm	9.3 mm	10 mm
Height	4.5 mm	8 mm	6 mm	6 mm

Table 5.3 Measurements of examples from Magdalensberg

Conceivably, it is a regional type that includes names and sometimes the status of individuals. There is the same physical form as Herzog's *tesserae*, *tesserae lusoriae* and tribal *tesserae*. All but one of the nine inscribed examples have a circular head at the end. Cat. 170 has a head that is shaped like an arrow and ends in a point. However, personal names are not features of *tesserae lusoriae* or tribal *tesserae*.<sup>143</sup> Cat. 169 even has the abbreviation *S* after the genitive

<sup>141</sup> Cat. 162, 163, 166, 168.

<sup>142</sup> Cat. 163, 164, 167, 169, 170.

<sup>143</sup> See further Chapter 7.

family name, which the excavators have interpreted as *servus* (slave) of the Priamus family. Cat. 170 has the entire term *SERVUS*, sloppily scratched into the third side, as if it were added after the inscription on the first side. The first side also bears the abbreviation *S*. This is the only example in the entire corpus that identifies the servile status of the individual twice.

The Magdalensberg group tends to bear more decoration than Types 1-3, notably floral and concentric circular decorations that fill in the blank sides. Also, a palm leaf decoration is found on the second and fourth sides, comparable to decoration on undated *tesserae* found outside of Magdalensberg.<sup>144</sup> Yet none has the incisions at either end of the body typical on Herzog's *tesserae*. Thus, it seems that the Italian Republican (Type 2) form of his *tesserae* is evidently known to those living at Magdalensberg, but a local adaptation is being made. Data beyond the names of individuals are apparently superfluous and not inscribed in place of decoration.

#### Section 5.3.5 Rimini Group (nos. 181-184)

The four examples found at Ariminum (modern Rimini, Italy) also bear mentioning. Donati has conceded that all four have been considered dubious, due to the discrepancies in the texts.<sup>145</sup> However, she argues from the paleography of the inscriptions and method of inscribing that all four are genuine.<sup>146</sup> The rectangular shape and part of the inscriptions echo the formula which appears on Herzog's *tesserae*. All four examples are made from bone rather than ivory. On three of the four (Cat. 181-183) there are incised lines, and the left end is preserved. Notably, each of these examples lacks a perforation and a head at that end.

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<sup>144</sup> Cat. 165 and 169.

<sup>145</sup> Donati (1981), 145.

<sup>146</sup> See Donati's (1981), 147, comments and her reference to *Imagines*, no. 338-350 for support of this claim.

Additionally, the texts recall wording on Herzog's *tesserae*, but are not exactly parallel. Cat. 182 has a trident inscribed on the first side (as Donati presents it), a name in the nominative, a possible consular name (but just one named person), and the abbreviation *SP* with the date (Ides of July). Cat. 181 is a partial example, as the rightmost portion is missing. It is the closest to the typical textual formula of Types 2 and 3. There is a name (*APOLO*), the first portion of a date on the second (not the third) side (*SP.K....*), and two additional names on the third and fourth sides. If *C.RVTILLIVS* on the fourth side can be identified as a consul, the *tessera* may be dated to 72 or 73 CE.<sup>147</sup>

Calabria and di Jorio consider Cat. 181 and 182 genuine examples, not modern forgeries.<sup>148</sup> This claim is based upon the content of the inscriptions. It is possible that, as at Magdalensberg, a regional type emerged with an irregular form and textual formula. Yet how could these labels be attached to bags of coinage as certification if there is no perforation? Perhaps the string or cord could fit in the incised line, as Donati argues is indicative of the type.<sup>149</sup> But this would surely be less secure than a cord passed through a drilled hole. I have not studied any fully preserved example which lacks an original perforation. Those that do not have a perforation are broken and missing the end where the head and perforation would have been. There are, however, notable examples lacking incisions.<sup>150</sup> These examples would have been secured to their object by the perforation only.

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<sup>147</sup> See Calabria and Di Jorio (2018), Tab. 1.142.

<sup>148</sup> Calabria and Di Jorio (2018), Tab. 1.142, 149. For the two considered as doubtful: (2018), Tab. 2, D11 and D12.

<sup>149</sup> Donati (1981), 145, cites Herzog's definition of the type to include the verb *spectavit* and an incised line for securing the label to the bag.

<sup>150</sup> Cat. 60 and 70 both lack incised linework on the body.

Type	Mean Length	Mean Width	Mean Height	Shape of "head"	Placement of perforation	Decoration on body	Inscription
1	44.5 mm	8 mm	7 mm	Circle	Base of head	Double border- 1 <sup>st</sup> and 3 <sup>rd</sup> sides, incised lines at top and bottom of body- 2 <sup>nd</sup> and 4 <sup>th</sup> sides	Names in nominative and genitive on first side; inconsistent pattern on second through fourth sides
2	44.5 mm	8.69 mm	6.8 mm	Oval	Neck or head	Incised lines at top and bottom of body on all sides	1) Nominative 2) Genitive 3) <i>SP</i> and day of month 4) consuls' names
3	48 mm	11 mm	7.2 mm	Trapezoid	Top of the body	Incised lines at top and bottom of body on all sides	Same as Type 2
Magdalensberg Group	52.5 mm	9.3 mm	6 mm	Circle	Neck	No incised lines; additional incised images on Cat. 162, 165, 169	Personal names inscribed on the first and sometimes third side (Cat. 163, 164, 167, 170)
Rimini Group	35 mm	7 mm	4.6 mm	No head	Not perforated	Incised lines at top and bottom of body on all sides; trident on Cat. 182	Personal names and sometimes <i>SP</i> (181-182)

Table 5.4 Features of each type or group.

## Section 5.4 Legibility Aids

Extant examples demonstrate that the inscribers used aids to improve legibility. These include the addition of red pigment to the lettering (*litterae rubricatae*) and the use of interpuncts. The latter aid is common. Preservation of red pigment is rarer. However, several examples at the Petit Palais, Paris, demonstrate that on at least some *tesserae* red pigment was added to the lettering (Cat. 16 and 41) and in some cases to the incised margins (Cat. 133).

Interpuncts appear on examples with multiple words on a single side. On Type 1, interpuncts appear on the first side to separate the name in the nominative from the name in the genitive. Cat. 2 also displays interpuncts on the second and fourth sides, while Cat. 1 has interpuncts on the second and third sides. Where the standard textual formula is followed on Types 2 and 3, interpuncts typically appear on the third and fourth sides. Cat. 61 is a rare example that lacks interpuncts on the third side, yet has them on the fourth side.

Interpuncts are always triangular; other shapes for interpuncts, such as squares and rectangles, do not appear. Unlike other features of the *tesserae*, the interpuncts remain consistent. Oddly, the square or rectangular interpuncts common on inscriptions of the Republican period are not found, nor are any of the rare, more elaborate interpuncts, such as ivy-leaves (*hederae*) or tildes.<sup>151</sup> As with the incised decoration, it appears that simpler interpuncts were the preference, no doubt to streamline inscribing the *tesserae*.

## **Section 5.5 Physical Variants**

While many examples I have studied fit in Types 1-3 outlined above, a few exceptional examples do not. Physical anomalies include a different head, additional incised decoration and, in three cases, additional sides. For Republican examples, additional incised decoration seems to be the only anomaly. In my corpus the Principate witnesses the greatest physical variation in the corpus, in form, decoration, and size.<sup>152</sup>

### **Section 5.5.1 Republican Examples**

Two *tesserae* dating to 42 BCE appear to have unique features. There are drawings of each of the four sides of Cat. 68. The dimensions, shape of the body, and circular head are

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<sup>151</sup> For an overview of interpunct shapes, see Edmondson (2015), 124.

<sup>152</sup> This claim is based upon only the examples I have studied, together with clear publication of the physical difference of some others.

comparable to that of Type 2. However, from the drawing it appears that the double incised border, common on the first and third sides of Type 1, is present on each of the four sides. This is therefore a more detailed design than either Type 1 or Type 2, one that does not appear to emphasize any portion of the inscription since it is on each side. By contrast, Cat. 70 has less decoration than the typical Type 2, completely lacking incisions (at least on the first and third sides, the only two for which there are drawings).<sup>153</sup> Moreover, it is perforated from the first through the third side in the middle of the circular head. It is unclear how accurate the drawing is, and the current whereabouts of the *tessera* are unknown.

Anomalies in decoration are also present on three other Republican examples. Cat. 60 (dated to 50 BCE) lacks an incised border on all four sides.<sup>154</sup> Cat. 6 (80 BCE) and Cat. 28 (62 BCE) have a double rectangular border on all four sides. Rather than a border around the entire inscription, Cat. 67 (44 BCE) has double incisions at the top and bottom of the body instead of a single incision.

The French excavation team at Gabii recovered one *tessera* during the 2015 season (Cat. 146). It is quite small, measuring only 32 mm long. Incisions are made to form a deep border to frame the text on all four sides. This border has double incised lines, comparable to Type 1 decoration. The head is circular, but there is no neck; the head appears to be the same width and thickness as the body. The perforation runs through the head rather than the body, from the second to the fourth sides. There are two bands of criss-crossing incised decoration along the top of the head. While the head is most like Type 2 examples, the additional decoration and the proportions of the head and body set it apart. The second and fourth sides are too damaged to

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<sup>153</sup> For the drawing from the manuscript, see Buonopane (2019b), 65.

<sup>154</sup> Cat. 7 (77 BCE ?) is severely damaged, making it hard to determine if there are any incisions on the preserved sides.

reconstruct the text. This example cannot be precisely dated. Its excavators have argued from the shape of the head for a date between 100-20 BCE.<sup>155</sup> I would incline instead to a closer date between 80-30 BCE because the *tessera* does not resemble the proportions of Type 1, and the preserved text seems to follow the formula that emerges during Type 2. The head is morphologically closer to Type 2 examples, but the dimensions are closest to the earliest examples of Type 3 (20s BCE).

### Section 5.5.2 Principate Examples

Herzog’s *tesserae* dating to the Principate have the greatest variation in dimensions. The length of these examples ranges from 24 to 88 mm. The average length is nearly 5 mm longer than Types 1 and 2 at 49.1 mm. The median length is 48 mm. These examples are rectangular in section with a difference of four mm between the average width and height (average width 11.7 mm, average height 7.4 mm).

<i>Principate Examples</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Average</i>	<i>Median</i>
Length	24 mm	88 mm	49.1 mm	48 mm
Width	5 mm	15 mm	11.7 mm	11 mm
Height	5.5 mm	11 mm	7.4 mm	7 mm

Table 5.5 Measurements of Principate examples of Herzog’s *tesserae*.

The three hexagonal *tesserae* all date to the Imperial period. Two of them (Cat. 76 and 120) have additional incised decorations on the third and sixth sides. The third (Cat. 131)

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<sup>155</sup> Glisoni et al. (2017), 26: “La forme cylindrique de la tête de la tessère nous permet de la dater d’entre 100 et 20 avant J.-C.” The authors mention this as the second *tessera* to be found in a sanctuary context. For the other *tessera* from a temple complex, see Pensabene (1987), 69-76.



evidently stretches the consular date and abbreviation across three sides, rather than one.<sup>156</sup> Cat. 120 is poorly preserved. Its sixth side cannot be read, but the third side has incised decoration with a straight line between two wavy ones. Both Froehner and Herzog published drawings of the decorations on this *tessera*, which were apparently identical on the third and sixth sides.<sup>157</sup> This type of decoration is uncommon on other examples. By contrast, Cat. 76 has a palm leaf on the third side and a trident on the sixth side, both of which appear on other *tesserae*. Cat. 120 is perforated through the body, similar to Type 3. The perforation runs from the third through to the sixth side so that it does not impact the inscriptions on the other four sides. Cat. 76 is perforated from the second through to the fourth side, through the head rather than the body.

The Principate examples yield a variety of head shapes beyond the trapezoidal head of Type 3. Cat. 78, dated to 21 BCE, is one of the smallest fully-preserved examples observed to date, measuring 28 mm long. It also has a unique head. While Type 3 *tesserae* have a small, decorative trapezoidal head, Cat. 78 has a rounded head the same width as the body (12 mm), with a horn on either side. There is no distinguishable neck. The hole is drilled in the middle of the head, from the first side to the third (thus differing from examples with a hole from the second to the fourth side). Even more curiously, Cat. 78 is from a month when there was only one consul: Marcus Lollius. This *tessera* is dated to January 1<sup>st</sup> 21 BCE, after Augustus refused to be a candidate, yet the consulship he might have filled was left vacant.<sup>158</sup> If the drawings of Cat. 11 (73 BCE), Cat. 17 (70 or 55 BCE) and Cat. 79 (19 BCE) are accurate, they are the closest in form to Cat. 78. Cat. 11, 17 and 79 all appear to be perforated from the first to the third side

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<sup>156</sup> The claim is based on the presentation in *CIL* I.772. I have not seen this *tessera* nor an image of it.

<sup>157</sup> See vol. 5 p. 287 of Froehner's catalog of items in the BNF and Herzog (1937), Tab. 1.114.

<sup>158</sup> Cassius Dio 54.6.2.

and have a rounded head the same width as their bodies. If the drawings reflect the form, this group appears not to be limited to a particular period.

Two examples have anthropomorphic heads. Cat. 75 has a female head with ornate detail below it. The head is on a base with crisscrossed incisions on all four sides.<sup>159</sup> Like most of Herzog's *tesserae*, it is perforated from the second through the fourth side, and not through the female head but through the incised base. Even with its ornate figural decoration, the *tessera* still has incised lines at either end of the body to frame text. However, the texts on three of its sides are essentially illegible or were never completed. Herzog read the text on the first side as ending in *S*. The second side, he read as *L(i)V(iae Augu)STI*. The fourth side he reconstructed as *IMP(eratore) C(aesare VIII M) SIL(ano) CO(n)S(ulibus)*.<sup>160</sup> He thus dated the *tessera* to 25 BCE. Only the third side is completely legible, reading *SP(ectavit).K(alendis).IAN(uaris)*. I can read only *IMP* in ligature, the faint outline of a *C* following this, and *COS* on the fourth side.

Even with RTI, it is impossible to reconstruct the text on the first, second, and fourth sides. RTI of the second side shows intentional marks for the base of three letters at the far right end. Perhaps a *V* follows the *I*, therefore rendering Herzog's reading impossible. I am inclined to agree with the reading of Mommsen and Henzen in this instance.<sup>161</sup> With RTI of the second side I see no definitive indications of the *LVST* which Herzog reconstructed.<sup>162</sup> The letters on the third side show that the base of each letter had serifs which slanted upwards. Nevertheless, this *tessera* with *IMP(eratore)* on its fourth side is clearly an Imperial example. It is the only one with a female head, apparently of a woman with a simple braided bun, a popular hairstyle during

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<sup>159</sup> Cf. a decorated bone hair pin with the same crisscrossing design: Béal (1983), 219 n. 722.

<sup>160</sup> Herzog (1937), col. 1427.

<sup>161</sup> *CIL* I 739.

<sup>162</sup> Herzog (1937), Tab 1.78.

the Principate.<sup>163</sup>

The second example with an anthropomorphic head is that of a male helmeted soldier (Cat. 173). The perforation is through the top portion of the helmet (running from the second to the fourth side). This *tessera* was found in Aquileia and has text inscribed only on the first side, similar to the examples from Magdalensberg. The names have the appearance of graffiti. As on other undated examples, palm leaves appear on the second and fourth sides.

Two of the latest dated examples with their heads still attached have a completely spherical head. Cat. 139 (66 CE) and 144 (83 CE) are perforated through the body, similar to the typical Type 3. Both have a decorative head or handle, although the trapezoid is replaced by a ball. These are the only two examples I have seen with this style of head. The drawing of Cat. 140 also reflects a head of this form. Cat. 144 is perforated from the first through the third sides, rather than the second through the fourth. Cat. 144 also lacks interpuncts on the third and fourth sides.

Two other Principate examples also have a second perforation that runs through the inscribed first and third sides. Both Cat. 72 and Cat. 111 were originally perforated through the second and fourth sides at the neck (not the top of the body). A second drilled hole was added after the text was inscribed on all four sides, as the hole obscures the texts. The head and neck of Cat. 111 are still intact. Cat. 72 is damaged at the neck. Perhaps the second holes were added to reattach the label to its object. More likely, these holes were an additional security feature. Perhaps they rendered the label useless so that they could not authenticate another object, as Gostenčnik argued was necessary.<sup>164</sup> If this is the case, it is curious that we do not see this

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<sup>163</sup> Bartman (2001), 12-14.

<sup>164</sup> Gostenčnik (2005), 253.

feature on more examples.

There are a few Principate examples with additional incised decoration. One of the earliest (Cat. 73) has a faint single border around the text of each side. The border is incised shallower than the inscriptions on each side and is barely noticeable. Cat. 80 dated to 19 BCE has its head and perforation placed similarly to Type 3, but it also has a double border framing the text of each side.

### Section 5.5.3 Decoration

As discussed above, Herzog's *tesserae* normally bear minimal decoration. Only a few anomalous examples, ones without text inscribed on all four sides and the two hexagonal examples, have inscribed images. The Magdalensberg group bears unique decorations on multiple sides. Only a handful of examples found in Italy have additional decoration. Most *tesserae* with additional decoration cannot be precisely dated.<sup>165</sup> Those which I have studied in person are morphologically similar to Types 1 and 2. I do not attempt to propose an interpretation of the meaning of each of these symbols. At present, I catalogue the examples as a further commentary on the three main phases of Herzog's *tesserae*, and on how these features might assist us to date examples which do not name consuls. I discuss previous interpretation of these symbols to highlight the ambiguity and multiplicity of meanings that have been associated with them on Herzog's *tesserae* and on other types of *instrumentum domesticum*. Interpretation has naturally formed part of discussions about the function. For instance, Andreau proposed that the symbols indicated the type of coin in the bag. Pedroni was not convinced, holding that Andreau's association rested on inconsistent bases.<sup>166</sup> I postpone my interpretation of the

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<sup>165</sup> Two notable exceptions are Cat. 76 and 120.

<sup>166</sup> Pedroni (1995), 172.

symbols to Chapter 8.

The most common inscribed decoration is a palm leaf. It occurs on seven examples I have seen and has been identified on a further three.<sup>167</sup> When Herzog's *tesserae* were considered *gladiatoriae*, Henzen proposed that the palm leaf and crown symbols represented the gladiator's victory.<sup>168</sup> In my view, a convincing interpretation of the symbol remains elusive.

Other incised decoration includes a dolphin (Cat. 155 and possibly 157), trident (Cat. 76, 154, 157, 160, 182), burning altar (Cat. 155, 157, 174), and circular designs (particularly on Magdalensberg examples). Two (Cat. 155 and 174) of Herzog's *tesserae* have burning altars depicted on the fourth side. Cat. 157 allegedly has an altar depicted on its second side along with other symbols, but this *tessera* is now presumed lost and there are no images of it. The images of the burning altar on Cat. 155 and 174 are strikingly similar, with the same overall shape and three inscribed lines perhaps to signify a sacrifice burning on the altar. The altar on the Ostra example (Cat. 174) appears to be slightly smaller in size than the image on Cat. 155. Both these *tesserae* have additional inscribed decoration on another side. However, the Ostra *tessera* is not inscribed on the first side.<sup>169</sup> It is one of the eight *tesserae* in the corpus without an inscription or incised decoration on one or more sides. There is no individual or family associated with Cat. 174, unlike Cat. 155 which names Pampilus of the Fulvius family (*PAMPILVS.FVLVI*) on its first side. On the second side of the *tessera* of Cat. 155 there is a dolphin, which is oriented right to left (instead of left to right as the text and image on the other three sides). The dolphin is also inscribed upside down. The example from Ostra has a bundle of lightning bolts incised on the

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<sup>167</sup> Cat. 162, 165, 169, 173, 176. The symbol is visible in photographs of Cat. 76 and 152. Herzog also identified palm leaves on Cat. 154, 157, and 160.

<sup>168</sup> Henzen (1848), 289: "Sulla quale la palma e la corona accennano a vittoria riportata."

<sup>169</sup> Cinti (2005), 297.

fourth side, an image which most closely resembles the drawing of Cat. 3 (93 BCE).

Herzog has suggested that, without consuls named, these *tesserae* could pre-date the oldest dated *tessera* of 96 BCE and so could have been manufactured during the second century BCE, specifically between 150 and 100 BCE.<sup>170</sup> I would caution against this hypothesis due to the absence of consular date and because no dated examples from this period have yet been recovered. I agree that the form of most examples with additional decoration resembles Types 1 or 2. While Cat. 174 could be older than 96 BCE, Cat. 155 has the same incised border work as Type 1, with a double incised border around the text of the first and third sides and incised lines at either end of the second and fourth sides. Cat. 174 from Ostra has double incised lines at either end of all three inscribed sides, similar to gaming *tesserae* (see further Chapter 7). Both *tesserae* clearly have layouts that are early in date, but to determine a precise date or a date range is impossible. Two examples with incised decoration that can be dated are six-sided ones from the Imperial period.<sup>171</sup> To rely on incised decoration alone as a dating mechanism is therefore problematic. These images appear on multiple types of *instrumentum domesticum* across centuries.

The Magdalensberg group bears the most distinctive decoration of the entire corpus. While there are examples found elsewhere with inscribed palm leaves, other symbols on *tesserae* from Magdalensberg do not appear on any other of Herzog's *tesserae*. Cat. 165 has an ivy vine with several leaves inscribed on its second side, while a palm leaf is on its fourth side. Cat. 162 has concentric circles, a tree, and a palm leaf

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<sup>170</sup> Herzog (1937), col. 1422-1423. Others have accepted this dating scheme: Cary (1923), 112-113; Cinti (2005), 298. Di Jorio and Calbaria present these *tesserae* first in their table according to Herzog's dating: (2018), Tab. 1.1-4.

<sup>171</sup> Cat. 76 (25 BCE) and 120 (24 CE).

decoration on its second side, while concentric circles are the only decoration inscribed on the fourth side. Few of Herzog's *tesserae* have multiple inscribed images on a single side.

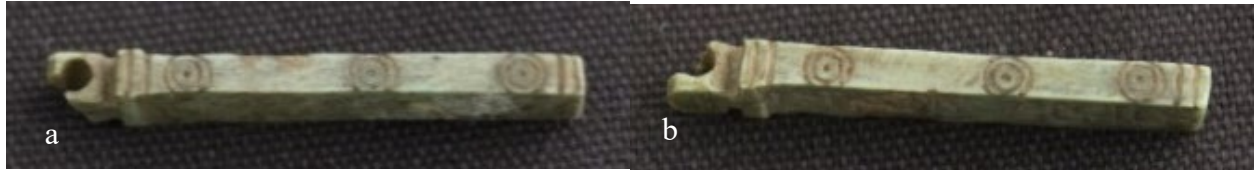


Fig 5.3 a-b. Second and fourth sides of Cat. 178 from Tarracina.

The only other *tessera* to have concentric circle adornment is Cat. 178 from Tarracina (Fig. 5.3). Its decoration is most comparable to that of Roman dice or other gaming pieces (Fig. 5.4). On both dice and *tesserae*, there is a dot surrounded by one or two concentric circles. On each dice the number of concentric circle decorations corresponds to the number that side represents. On Cat. 178 both the second and fourth sides have three concentric circle decorations which the inscriber intended to space equally on a given side: one on the left, one in the center, and one on the right end.

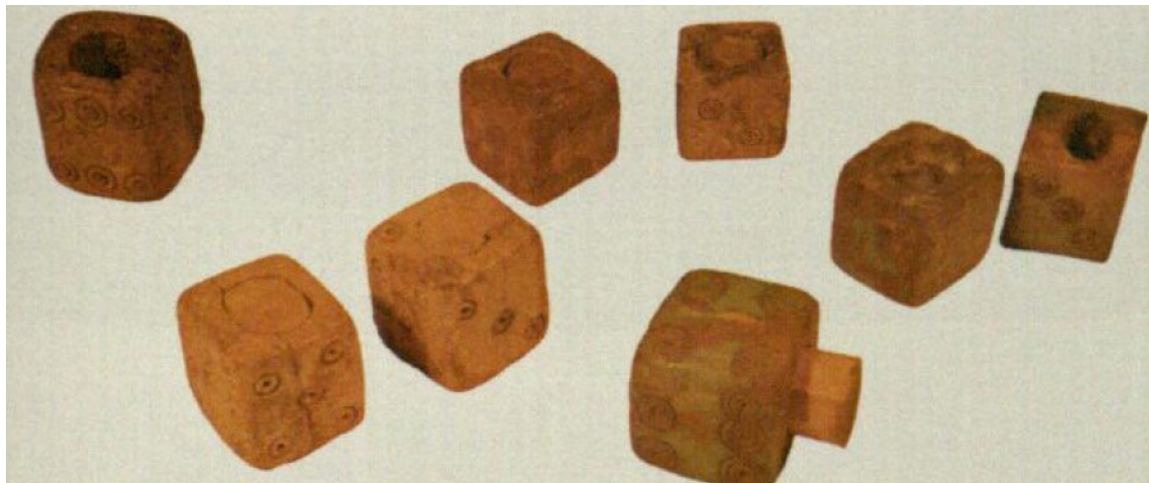


Fig 5.4. Six bone dice in Giulio Sambon's collection in Milan. Reproduced from Giacobello (2015), Tav. 7, 18-24.

An example of a rectangular object, comparable in length to Herzog's *tesserae*, with these symbols was found in Egypt (Fig. 5.5). Each face has a different number of concentric circular designs. The first face has one in the center, the second two (one at

either end), the third six (three at either end), and the fourth five (two at either end and one in the center).<sup>172</sup> The piece has been interpreted as an example of a gaming piece used in Pharaonic games of chance in Egypt.<sup>173</sup> It was made from hippopotamus tusk.<sup>174</sup> Whether the concentric circle designs on Cat. 162 and 178 correspond to a particular number is unclear. The concentric circular pattern also appears on the heads of rectangular bone and ivory *tesserae lusoriae*.<sup>175</sup>

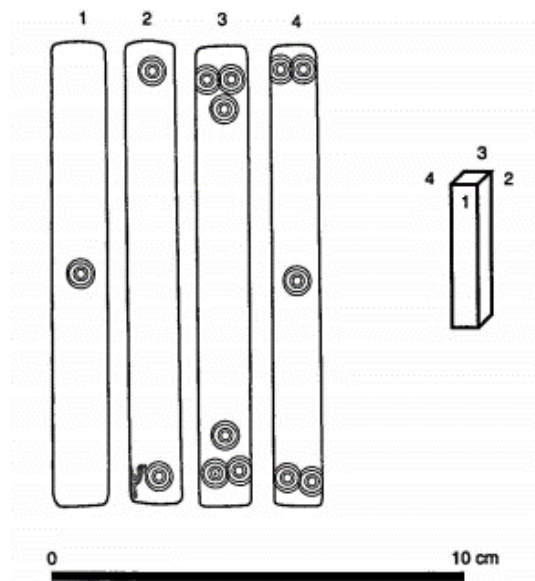


Fig. 5.5. Gaming piece made of hippopotamus tusk with concentric circular design found in Egypt. From Goyon (2000), Fig. 1.

#### Section 5.5.4 Fakes and Copies

Researchers must be on the alert for copies and fakes housed in museum collections.<sup>176</sup> Because Herzog's *tesserae* have long been popular among antiquarians, due to their portability and inscriptions, during the 17<sup>th</sup> and 18<sup>th</sup> centuries some were copied and fakes were also

<sup>172</sup> Goyon (2000), 148 and Fig. 1.

<sup>173</sup> Goyon (2000), 148.

<sup>174</sup> Goyon (2000), 147.

<sup>175</sup> See further Chapter 7, Fig. 7.1.

<sup>176</sup> *CIL* I 776a-cc.



made.<sup>177</sup> Fakes contain elements of the textual formula present on the *tesserae*, but do not name attested consuls. Fakes differ morphologically, often having additional decoration and different heads. They are generally made of bone and are not polished.

Copies replicate the text of genuine examples and at least two reproduce the form of the original *tesserae* relatively faithfully.<sup>178</sup> I rely on Mommsen's notes in *CIL* I for the presence of copies when the original's location is now unknown. However, when I have only seen a copy but no genuine images of the original *tessera*, I cannot draw conclusions about whether the copy reflects the genuine form.

Two copies of Cat. 98 and 99 have recently been published as genuine examples (Fig. 5.6 and 5.7). As early as 1848, these two *tesserae* were reported as part of August Kestner's collection, now located in Hannover;<sup>179</sup> this information is repeated in *CIL* I, published in 1863.<sup>180</sup> Ritschl's two publications also include drawings of these *tesserae*.<sup>181</sup> In 1991, Mlasowsky published the texts and grayscale photographs of all four sides of both in his catalog of the *tesserae* in Kestner's museum, confirming that they remained part of its collection.<sup>182</sup>

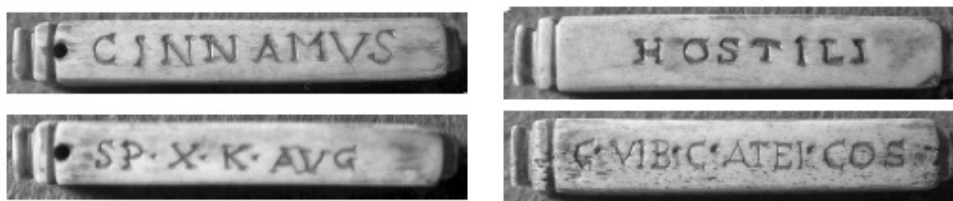


Fig. 5.6 Copy of Cat. 99. Eck and Pangerl (2019), Abb. 5-8.

While the copies published in 2019 are convincing replicas, there are morphological and

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<sup>177</sup> Andreau (1987), 487-488; Buonopane (2009), 260.

<sup>178</sup> Eck and Pangerl (2019), 231-234.

<sup>179</sup> Henzen (1848), 288.

<sup>180</sup> *CIL* I 750 and 751.

<sup>181</sup> See my Cat. 98 and 99 entries.

<sup>182</sup> (1991), no. 178 and 179.

paleographic differences from the genuine examples. Even from the drawings published by Ritschl it is clear that the head of Cat. 99 is broken. The break is not replicated. While the placement of the perforation on the body, rather than on the head or neck, is correct, it runs from the first to the third side, not (as it should) from the second to the fourth side. Beyond physical differences, the letter forms differ from genuine examples. When Cat. 99 was published and drawn, the *OS* of *HOSTILI* on the second side was barely visible.<sup>183</sup> Yet, on the copy, the *OS* is clearly inscribed. In the 19<sup>th</sup> century publications, letters were not all the same height: the *I* at the end of *HOSTILI* on the second side and the *I* in *VIB* on the fourth side are clearly taller than the rest. This difference is not replicated on the copy of Cat. 99, which makes all letters the same height.

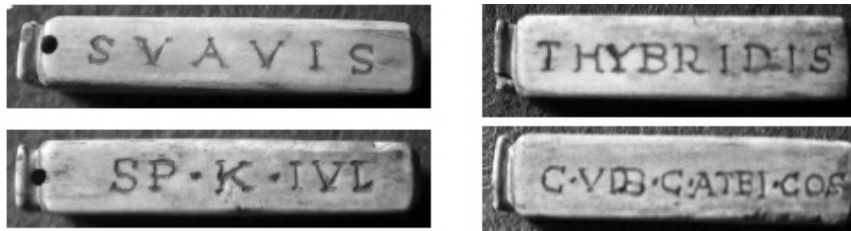


Fig. 5.7 Copy of Cat. 98 with an error on the fourth side (bottom right). Eck and Pangerl (2019), Abb. 1-4.

On Cat. 98, the two *I* letters on the fourth side are taller than the others in *CIL* I and 19<sup>th</sup> century drawings.<sup>184</sup> The copy of Cat. 98 also has an error in the inscription on the fourth side. Instead of *VI*, *VD* is inscribed. The inscriber attempted to transform *D* into the vertical line of the *B*. This error is not shown on Ritschl's drawing or on the genuine Cat. 98. Morphological discrepancies also emerge on the copy of Cat. 98. It lacks incised line work at the top and bottom of the body. The head appears to be quite flat. Finally, the perforation runs from the first through the third sides, unlike the drawing published by Ritschl and the genuine example. It is possible

<sup>183</sup> *CIL* I 751; Ritschl (1864), no. 44; Ritschl (1878b), Taf. XXII fig. K.

<sup>184</sup> *CIL* I 750; Ritschl (1864), no. 43; Ritschl (1878b), Taf. XXII fig. J.

that the copier had seen a drawing of it and misinterpreted the line work and head style.

One example in the British Museum (Fig. 5.8) is believed to be a copy of the genuine Cat. 91 dated to 3 BCE.<sup>185</sup> Upon inspection, this copy's form and script are in fact unlike those of genuine examples. It clearly is a modern copy, yet it retains elements to show its maker's awareness of Herzog's *tesserae*.



Fig. 5.8. Copy of Cat. 91.

It has an oblong head, wider at the neck than at its top. It is perforated on the head rather than the body but perforated from the second to the fourth side, as is typical on Type 3 *tesserae*. The dimensions of this *tessera* resemble Type 2 examples rather than Type 3, measuring 49 mm long, 7 mm wide and 6 mm tall. This example has double incisions making a border on the first and third side, and a single rectangular border on the other two sides. The letter forms do not reflect Imperial lettering and their incision is much shallower than on genuine examples. Whether the shape and decoration of this copy reflect the original, or if the copy only reproduces

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<sup>185</sup> *CIL* I 748; British Museum Trustees Report (1883), 37.

the original inscription, is unclear.

At least five examples in the British Museum collection were suspected as fakes by Mommsen, Hübner, and Ritschl in the 19<sup>th</sup> century.<sup>186</sup> The five do not appear to copy the texts of genuine ancient examples perhaps so as to pass them as new genuine examples (Fig. 5.9). On the center example shown, the name of the certifier is in an incorrect case and includes filiation (*M.CATIO.P.F*), which is not common on genuine examples.<sup>187</sup> On the left example, the text reading “*PAMPHILVS/ SERVILP*” echoes the inscription of Cat. 64, but has a different date inscribed on the third side and only names one consul in the incorrect (nominative) case.<sup>188</sup> The right example shown with the name “*ALBINVS*” lacks a family name in the genitive and another name in the nominative to name a freedman.



Fig. 5.9. Above: Drawings of the three fakes now housed in the British Museum. Ritschl (1878), Taf. XXI figs. C-E. Below: One side of three suspect examples made from bone currently housed in the British Museum. BM 1772.3-11, BM 1814.7-4.1281, BM 1814.7-4.1282.

<sup>186</sup> British Museum Trustees (1883), 39, acknowledge this in their report.

<sup>187</sup> British Museum Trustees (1883), 39 no. 2, presents the text in a different order: *TI·CLAUDIO/SECUNDO/SP·K·APR/M·CATIO·P·F*

<sup>188</sup> On Cat. 78 and 79 the case of consuls' names is the ablative.

The script and appearance of the fakes are similar to the copy of Cat. 91. The letter forms do not appear to reflect Republican or Imperial lettering. The only letter that is close is the *S* which is inscribed on a slant and has serifs. The rest of the letters are quite straight and thin. The interpuncts are distinctly circular rather than triangular. While the letters are all capitals, they are not incised to the depth of genuine examples. The form of the fakes, while rectangular in shape, has narrow trapezoidal heads that are different from those of Type 3. Finally, there is a single incised border on all sides of the examples, unlike any of the Types discussed above.

There remains a possibility that the *tesserae* in Appendix 1 may include fakes or copies. Fakes and copies were already drawn when Ritschl was assembling his plates (Fig. 5.9). Without the opportunity to study *tesserae* that were only drawn or have no images, I rely on the notes of Mommsen, Ritschl and others for their suspicions. These items are noted as “suspect” in my catalog. Awareness of fakes and copies is necessary for evaluating the change in form over time. It is also necessary to differentiate between an unpracticed ancient hand and modern forgery.

### **Section 5.6 Conclusion**

The physical examination of the 121 photographed *tesserae* reveals that there were distinct phases of manufacture, corresponding as it happens to political changes in Rome. Particularly during Type 2, standardization developed in the shape, script, and content of Herzog’s *tesserae*. During the Principate, there is decidedly more variation in physical shape. Without an examination of all Herzog’s *tesserae* it is impossible to tell if the variants are truly rare occurrences or if more examples exist. However, this large sample of 121 *tesserae* (approximately 65.8% of the corpus) demonstrates beyond doubt that, while a few variants emerged, there were three main successive types (summary in Table 5.4). The Principate Type 3 was a substantial break from the Republican Types 1 and 2. The variations in shape of head,

additional decoration, and material used suggest that there were multiple locations producing Herzog's *tesserae*. The unique nature of the Magdalensberg group appears to indicate that local adaptations to the known typical form were made on site. The next chapter addresses whether the inscribed texts are truly formulaic. This investigation of the texts can assist in determining whether there is a convincing connection between the named individuals and a particular enterprise.

## CHAPTER 6: INSCRIPTIONS ON HERZOG'S ROMAN *TESSERAE*

### 6.1 Introduction

This chapter investigates the inscriptions on Herzog's *tesserae*, beginning with the script used on them, then turning to the textual formula, which appears on 114 *tesserae*. I pay particular attention to any chronological or geographic patterns that emerge for the use of common abbreviations. The frequency of the dates named and their significance are also considered.

In the last section, I investigate the identity of those named on the first and second sides of the *tesserae*. My study departs from previous examinations of Herzog's *tesserae* by not centering attention on those families named on the second side. Given that these families are identified by a single name, I am dubious about the prospect for identifying particular individuals. Instead, I use the frequency, status, and origin of the names as a lens into the people using these *tesserae*.

### 6.2 Script

Cursive does not appear on any of the examples, nor do any lower-case letters. Instead, standard capital letters appear on all examples. During the Republic, while many examples show precision and elegance to match later examples, there are *tesserae* which are more clumsily inscribed, such as Cat. 18. Republican examples display letter forms typical of the period. The characteristic carving of *P*, with an open bowl, is visible on Cat. 2. Both the *Q* with a tail that extends almost below the following letter and the wide-set Republican *M* are shown on Cat.

35.<sup>189</sup>

By the Principate, monumental square capitals (*scriptura monumentalis* or *capitalis quadrata*) are common (Cat. 92-102).<sup>190</sup> The librarial script (*capitalis libraria*) also appears on some examples (Cat. 101 and 112). Its letters are narrow, but evenly spaced. The letter *V* tends to have a curved left diagonal, while the right diagonal is straight (Cat. 113 and 114).<sup>191</sup> No matter the style of script, the Principate examples reflect the “classical” epigraphic style, with even spacing, precise line-work, and centered texts. Jonathan Edmondson has argued that the layout and spacing of inscriptions (on stone) in monumental square capitals reflect a widespread use of rulers and compasses among stone-cutters.<sup>192</sup>

At all periods letters typically have serifs. Only on a few *tesserae* are there no serifs on any letters (Cat. 18, 86, 147, perhaps 153, 173, and 174). Lack of serifs on letters is more common on examples from Magdalensberg (Cat. 161, 162, 165, 167, 168, 169) and from Iulium Carnicum (Cat. 171 and 172). On some *tesserae* only certain letters have serifs.<sup>193</sup> Moreover, the serifs change over time. On either end of the crossbar of the letter *T* they are pointed downward during the first century BCE (Cat. 61 and 73) and are slightly above the crossbar during the early 1<sup>st</sup> century CE (Cat. 94). On some examples the serif on the left end of the cross bar on the *T* is pointing down, while the right end is up (Cat. 133 and 137). Altogether the lettering on Herzog’s *tesserae* reflects great care and practiced hands.

A study of the lettering on examples that date to the same year indicates that multiple

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<sup>189</sup> Salomies (2015), 169-170.

<sup>190</sup> For scripts used on monumental inscriptions, see Edmondson and Bruun (2015), 123. The *Q* on the fourth side of Cat. 92 retains the long tail of the Republican script, while adopting the monumental capitals for the rest of the text.

<sup>191</sup> Edmondson (2015), 124.

<sup>192</sup> Edmondson (2015), 123.

<sup>193</sup> Cat. 144 has serifs on the *S* but none on the *As* on side one; only one *M* on the fourth side has serifs.



individuals were employed to inscribe the texts. The differences in styles are clear on sets of examples dated to the same year, and in one case (possibly) the same day. Cat. 61 and 62 demonstrate this point well. Both are dated to 48 BCE, less than three months apart. They are approximately the same size, measuring 38 mm and 34 mm long respectively. Cat. 61 is 10 mm wide and 8 mm tall, while Cat. 62 is 10 mm wide and 11 mm tall. The text on each also measures 3 mm high, with the notable exception of the *K* on the third side of Cat. 62, which is 4 mm tall. Cat. 62 uses interpuncts on the third and fourth side, while Cat. 61 has them only on the fourth side. The text on Cat. 62 slants upwards on the second, third and fourth sides. Cat. 61 has text which seems relatively straight on the first and third sides, while *SER* on the fourth side is slightly higher than the rest of the text. The letter forms reflect those of the Republic and are largely comparable. The most notable difference in letter forms is how *P* is inscribed. On both examples the bowl of the *P* is open, yet the serifs at the bottom of the vertical stroke extend in different directions. Cat. 61 has serifs extending inward towards the bowl of the *P*, while Cat. 62 has the serif extending outward towards the letter to its left. The *L* in the consul's name on the fourth side of Cat. 62 is in ligature, no doubt because the inscriber was running out of space on that side.

Even more striking is the difference in hand on Cat. 18 and 19. They were both inscribed on July 1<sup>st</sup> in a year when Pompey and Crassus were consuls. It is plausible they were both inscribed on July 1<sup>st</sup> 70 BCE, as there is no indication that it is the second time Pompey and Crassus served together (as appears on Cat. 47). Both *tesserae* are 44 mm long. Cat. 18 is inscribed with less finesse than Cat. 19, which has letters typical of the Republican period. All letters on its third side appear to be inscribed at the same height and are more or less straight. Cat. 18 has letters leaning to both the left and right. The letters *RA* on its first side are leaning

into the first *E*, while *CLE* are all leaning to the right. The serifs typical on letters are absent on Cat. 18. Interpuncts too are lacking on its third side, and just barely visible on the fourth. The difference in the letter *K* is the most drastic. The diagonals are barely visible on Cat. 18, while those on Cat. 19 are curving and clearly visible.

Cat. 48-50 are dated to 54 BCE. Cat. 48 and 49 are comparable in size: Cat. 48 measures 49 mm by 9 mm by 6 mm, and Cat. 49 measures 52 mm by 8 mm by 6 mm. The text measures 3 mm high on both examples. The letter forms are comparable, with a serif atop the vertical stroke of the *L* and the open bowl of the letter *P*. On both examples too, the letter *K* on the third side has a vertical stroke 3 mm tall, and the diagonals extend to match the height of this vertical stroke. Cat. 50, dated to September 54 BCE, is one of the shortest examples, measuring 26 mm long. It is comparable in width and height to Cat. 48 and 49 (measuring 7 mm wide by 6 mm tall). Most of the text on Cat. 50 measures 2 mm tall, except for the letter *K* on the third side. Its vertical stroke is taller than the surrounding letters, and the diagonal strokes barely extend outwards. This could be because the inscriber was running out of room on the third side and had to carve the *C* for October across the incision at the right end of the body. The *K* needed to be recognizable, but not take up too much space.

Cat. 94 and 95 are dated four days apart in April 3 CE. Both offer examples of the monumental square capitals. Measuring tools appear to have been used to space the inscriptions equally along each side of both *tesserae*. The letter forms are largely consistent between the two. Minimal differences in the letters *A*, *P*, and *R* are barely noticeable. On Cat. 95 the serifs at the top of *P* and *R* on the third side extend upward at an angle, and as far to the left as the serifs at the bottom of the vertical stroke. On Cat. 94 the serifs at the top of the vertical strokes of the *P* and *R* extend straight. These serifs are a continuation of the bowl shape and are not more visible

than the serifs at the bottom of the letters. However, on Cat. 94 the right diagonal of the letter *A* is thinner than the left and the serif on top is exaggerated, extending upwards and to the right. The letter *A* on the third and fourth sides of Cat. 95 does not have the exaggerated serif flaring to the right. The same difference in the letter *A* appears on Cat. 98 and 99, both dated to July 5 CE. Cat. 99, like Cat. 95, has an *A* with diagonals of equal thickness and a short serif on top.

Across the corpus, the script used suggests concern for the lettering to be visible and legible. None of the letters on the *tesserae* discussed above departs from known letter forms on other Latin inscriptions of the period. The minor differences in letter styles on *tesserae* dated to the same year suggest that there were multiple individuals inscribing them. The unique sans serif script on the Magdalensberg group, coupled with its unique materiality and form, reinforces the likelihood that multiple locations were used to manufacture Herzog's *tesserae*.

### 6.3 Textual Formula

As discussed in chapter 1, Herzog's *tesserae* are notable for their standard layout of text across all four sides. On the first side appears the name of a slave in the nominative, followed on the second side by a Roman family name in the genitive, the abbreviation for *SPECTAVIT* and a month and day on the third side, and the names of the consuls on the fourth side. This formulaic layout appears on 114 *tesserae*, a number no doubt underreported. In addition, on eleven *tesserae* the texts are damaged and cannot be reconstructed.<sup>194</sup> A further twenty-eight are not inscribed on all four sides.<sup>195</sup> Whether they were intentionally left blank, or were simply not finished, is unclear on some examples. On Cat. 75 there is no damage, but the text is either too lightly inscribed or has worn away for it to be reconstructed on the first, second and fourth sides, even

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<sup>194</sup> Cat. 7, 31, 39, 42, 129, 137, 146, 179, 181, 183, 184.

<sup>195</sup> Cat. 25, 53, 63, 75, 147, 149, 150, 151, 153, 156, 158, 159, 161-175, 177.

with use of RTI.

Nineteen examples depart from the standard layout of inscriptions. The text was arranged across the four sides differently on those of them with consular dates. That is all three Type 1 examples, four other Republican examples, and four Principate examples.<sup>196</sup> These are discussed below (Textual Variants). A further eight of the nineteen have additional inscribed decoration rather than the names of the consuls and days of the month.<sup>197</sup>

#### 6.4 Abbreviations

Beyond the abbreviations of the consuls' names and the dates on the third side (see further below), Herzog's *tesserae* typically use two important abbreviations: *COS* for consuls and *SP* or *SPECT* for *SPECTAVIT*. Additionally, some *tesserae* bear the abbreviation *S*, presumably for *SERVUS*. We should consider how common such mention of status is on the *tesserae*. The abbreviation *COS* does not always follow the names of the consuls on the fourth side. So what does its presence or absence suggest about the intention of the inscriber and the reception of these labels? Equally, the full *SPECTAVIT* rarely appears. Which abbreviation *SP* or *SPECT* is more common? Does the use or absence of these abbreviations reveal a chronological or geographic pattern?

##### Section 6.4.1 *S*

The abbreviation *S* is found on thirteen examples. However, only four of these can be dated to a specific year, and only one of these four follows the textual formula that becomes common during Type 2.<sup>198</sup> Most of the thirteen examples with this abbreviation were reportedly

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<sup>196</sup> Cat. 1-4, 11, 14, 24, 77, 81, 85, 86.

<sup>197</sup> Cat. 152, 154, 155, 157, 160, 176, 178, 182.

<sup>198</sup> Cat. 28 (62 BCE) is the only example following the textual formula. The other dated examples are Cat. 3 (93 BCE), 24 (63 BCE), 64 (46 BCE).

recovered outside of Rome, particularly from Magdalensberg.<sup>199</sup> Denoting the status of an individual with the abbreviation *S* is therefore uncommon, with the owner's name in the genitive normally considered enough to convey the relationship between the two named individuals.

#### Section 6.4.2 *SPECTAVIT*

The word *SPECTAVIT* or its abbreviation is present on 157 of the 184 *tesserae* (approximately 85%).<sup>200</sup> However, the full word *SPECTAVIT* rarely appears. It occurs only on examples that lack an exact date, with the exception of two of the earliest dated examples, from 94 BCE and 93 BCE.<sup>201</sup> The full *SPECTAVIT* on Cat. 147 led Francesco Belfiori to date this *tessera* to the period before 96 BCE, citing Herzog's 1919 catalog; but he is unaware that another dated example with *SPECTAVIT* has been published since (Cat. 2).<sup>202</sup> Dating based on the presence or absence of abbreviations rests on inconsistent bases.

Six abbreviations for *SPECTAVIT* appear on the *tesserae*. There is only one example for four of these: *SPE*, *SPEC*, *SPECTA*, and *SPECTAT*.<sup>203</sup> *SPECT* is more common, but appears on only seven examples, four of them Republican in date.<sup>204</sup> The latest dated example using *SPECT* is from 6 CE.<sup>205</sup> *SP* is the most common abbreviation for *SPECTAVIT*, appearing on 134

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<sup>199</sup> From Tarracina: Cat. 3 and 178. From Arelate: Cat. 24. From Agrigentum: Cat. 147. From Tarquinii: Cat. 154. From Magdalensberg: Cat. 163, 164, 169, 170. From Rome: Cat. 64, Cat. 157. Unknown findspot: Cat. 28 and 176.

<sup>200</sup> Cat. 31, 39, 42, 72, 120, 129, 151, 161-173, 175-179, and 183-184 do not have *SPECTAVIT* or an abbreviation preserved. On those examples after Cat. 144, there does not appear to be an intention to inscribe *SPECTAVIT*.

<sup>201</sup> Eleven examples use the full word *SPECTAVIT*. Cat. 2 and 3 dated to 94 and 93 BCE respectively. Cat. 147, 154-160, 174 are undated examples.

<sup>202</sup> Belfiori (2020), 14, with n. 16, argues that the stratigraphic context lends itself to the *terminus ante quem* established by the dating of the *tessera*. And he notes that the paleography of letter forms may support this date. Yet the letter forms he indicates appear on later dated examples, such as the open bowl of the letter *P*.

<sup>203</sup> *SPE*: Cat. 64 (46 BCE). *SPEC*: 153 (undated); *SPECTA*: 152 (undated); *SPECTAT*: 24 (63 BCE). However, Herzog's reading of Cat. 24, originally from Arelate, is suspect and the *tessera* is now lost.

<sup>204</sup> Cat. 1 (96 BCE), 4 (86 BCE), 11 (73 BCE), and 14 (71 BCE).

<sup>205</sup> Cat. 100. Cat. 77 (24 BCE) and 86 (9 BCE) are the other Principate examples.

examples (86%). The earliest dated example with the abbreviation *SP* is Cat. 5 dated to 85 BCE. By 63 BCE (Cat. 25), the abbreviation *SP* becomes by far the norm, with the exception of Cat. 64 and the three Principate examples with *SPECT* inscribed mentioned above.

#### Section 6.4.3 *A.D.*

*A.D.* for *ante diem* is commonly used on Republican examples when inscribing the date for days other than the Kalends, Nones, and Ides. It appears on twenty-four examples dating between 85 BCE and 47 BCE.<sup>206</sup> *A.D.* also appears on two undated examples, which are morphologically closest to the Republican Types 1 and 2.<sup>207</sup> The use of *A.D.* is abandoned during the Principate. Either Cat. 72 (27 BCE) or Cat. 74 (26 BCE) is the earliest example of a date that would have included the abbreviation but does not. Cat. 72 has a secondary perforation from the first to third side obscuring the start of the text on the third side. By Cat. 74 (which is fully preserved) *A.D.* is omitted for certain. Instead, the dates are referred to with only a number preceding *K*, *N*, or *ID*. Like other aspects of the textual formula, it seems that *A.D.* is dropped to streamline the inscription.

#### Section 6.4.4 *COS*

This abbreviation is not present on the fourth side of all examples. Only forty-three examples have *COS* (or *CO* rarely, *C* twice) following the consuls' names on the fourth side. Its use during the first century BCE is rare, and typically used to denote a consulship of Pompey or Octavian. The earliest dated example said to use this abbreviation is from 63 BCE, but the reading cannot be verified.<sup>208</sup> *COS* does not appear again until 56 BCE,<sup>209</sup> after which it drops

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<sup>206</sup> Cat. 5, 6, 8, 11-13, 16, 17, 20, 21, 25, 28, 30, 32, 33, 36, 41, 43, 44, 49, 50, 52, 53, 63.

<sup>207</sup> Cat. 147 and 158.

<sup>208</sup> Cat. 24 recovered from Arelate and now presumed lost. Neither Cat. 23 nor Cat. 25 (I have studied both), also dating to that year, use the abbreviation *COS* after the consuls' names.

<sup>209</sup> Cat. 46.

from use until it reappears in 52 BCE on three *tesserae* dating to April, May and June.<sup>210</sup> These latter three date to Pompey's sole consulship, prior to the election of a colleague, Quintus Caecilius Metellus Pius Scipio Nasica. On a *tessera* dating to September 52 BCE, both consuls' names are abbreviated and *COS* is omitted.<sup>211</sup> The abbreviation is not used again until Cat. 75, perhaps dated to 25 BCE, when only *IMP...C....COS* is legible.

During the Principate the abbreviation *COS* is used more frequently but does not appear on every example. Between 31 BCE and 2 BCE a discernable pattern for its use is difficult to identify. The tendency is to use it with reference to members of the Imperial family, or when there is a single consul.<sup>212</sup> Yet even this usage is not consistent. During the consulship of Gaius Sentius Saturninus, only one of three *tesserae* naming him as consul bears the abbreviation *COS*: Cat. 81.<sup>213</sup> This may be due to a difference in place of production, or more probably because different individuals inscribed the *tesserae*. Cat. 81 is the one example made in 19 BCE found in Mutina. One of the other two from this year was found in Rome, and the provenance for the third was not reported. The exact location of manufacture of each *tessera* is unknown. More generally, between 8 BCE and 29 CE the abbreviation *COS* is used on approximately 81% (thirty out of the thirty-seven) of the examples.<sup>214</sup> A *C* is added after the consuls on Cat. 124 and 125 in 29 CE because the entire abbreviation *COS* would not fit on either. On Cat. 100 (6 CE) and 115 (15 CE) *CO* is inscribed with insufficient space for the *S*. After 29 CE, *COS* appears only on a *tessera*

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<sup>210</sup> Cat. 54-56.

<sup>211</sup> Cat. 57.

<sup>212</sup> Cat. 85 (13 BCE) and 86 (9 BCE) when Tiberius was consul. Cat. 78 dates to January 1, 21 BCE when only Marcus Lollius was consul to start the year.

<sup>213</sup> Cat. 79-81 date to 19 BCE when he was the only consul.

<sup>214</sup> *COS* occurs on Cat. 87-123, except 88, 100 (*CO*), 101 (which is damaged but could have included the abbreviation), 115 (*CO*), 119, 120, 121.

dated to Claudius' second consulship in 42 CE.<sup>215</sup> On one other example the consuls' names are illegible, and *COS* is faintly traced before it was completely inscribed.<sup>216</sup>

#### Section 6.4.5 Abbreviations for Consuls' Names

Of the 145 *tesserae* which can be dated to a specific year, nine preserve only part of the consular names.<sup>217</sup> Another eight date to a period when only one consul or an interrex was the chief magistrate. The examples that name only one individual reveal no consistent choice of which of the magistrates' names to abbreviate. Quintus Caecilius Metellus Pius Scipio Nasica was briefly interrex in 53 BCE (Cat. 51). His name is abbreviated as *Q.MET* and followed by *INT* to denote that he was an interrex and not a consul in 53 BCE. In instances where only one candidate had been elected, a consul is identified by two or sometimes all three of his names. Neither Gnaeus Pompeius nor Marcus Lollius had a cognomen. Yet in 52 BCE when only Pompey was elected early in the year, the abbreviation *COS* was preferred to accompany the truncated form of Pompey's name. On three *tesserae* from 52 BCE, the year is recorded by the abbreviation of Pompey's name (*CN.POM* on Cat. 54 and 55, *CN.POMP* on Cat. 56), the abbreviation *COS*, and a number or abbreviation to signify his third consulship – numerals on Cat. 54 and 56, on Cat. 55 the letters *TER* following *COS*. On Cat. 78 *COS* follows the consul's abbreviated name; his praenomen is abbreviated by the first letter, while his entire nomen appears in the ablative: *M.LOLLIO*. On three examples dated to 19 BCE, Gaius Sentius Saturninus is identified in three different ways. On Cat. 79 from Rome, he is merely noted as

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<sup>215</sup> Cat. 131.

<sup>216</sup> Cat. 149, which therefore remains is an undated example, is morphologically similar to Type 3.

<sup>217</sup> Herzog (1937), no. 20, reconstructs the text on the fourth side of Cat. 7 as [D. I]UNIO[M.LEP] to date it to 77 BCE. I could not read the fourth side when I examined it. Lommatzsch does not suggest a reading for the fourth side: *CIL* I<sup>2</sup> 943. For the other *tesserae* yielding only partial abbreviations on the fourth side, see Cat. 31, 42, 50, 53, 75, 101, 120, 137.



*C.SENTIO* (abbreviated praenomen and full nomen), on Cat. 80 his three names are all abbreviated (*C.SENT.SAT*), and on Cat. 81 from Mutina his abbreviated praenomen and full nomen (*C.SENTIO*) are followed by the abbreviation *COS*.

On the *tesserae* which name two consuls, during the Republic and the early years of the Principate each consul's name is abbreviated with the first letter, or first two letters, of his praenomen, and the first three or four letters of his nomen or cognomen (Tables 6.1-6.3). However, on two *tesserae* from 32 CE Lucius Arruntius Furius Camillus Scribonianus is named by one cognomen and then his nomen (*CAM.ARR*).<sup>218</sup> On one *tessera* (Cat. 20) from 69 BCE, it is not clear whether the abbreviated name refers to one consul's nomen or cognomen: Quintus Hortensius Hortalus is named as *Q.HOR*.<sup>219</sup>

The Principate yields the most variety in identifying the consuls, due to the need to identify members of the Imperial family. The abbreviation *IMP* is used to identify the emperor, rather than his praenomen. When Augustus is consul, he is referred to as *IMP(eratore) C(aesare)* and the number of his consulship. His fellow consul in 27 BCE, Marcus Agrippa, is referred to as *M.AGR.III*.<sup>220</sup> Two *tesserae* of 26 BCE refer to the consul Titus Statilius Taurus as either *T.TAUR* or *T.TAU*.<sup>221</sup> Two *tesserae* dating to 45 CE abbreviate Titus Statilius Taurus Corvinus merely as *CORV* or *COR*, perhaps to distinguish him from his consular relatives.<sup>222</sup> Tiberius Plautius Silvanus Aelianus is referred to only as *AELIAN.II* in his second consulship (74 CE) to

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<sup>218</sup> Cat. 126 and 127.

<sup>219</sup> On Cat. 20 his fellow consul, Quintus Caecilius Metellus (Creticus) is named by praenomen and cognomen: *Q.MET*.

<sup>220</sup> Cat. 72.

<sup>221</sup> Cat. 73 and 74.

<sup>222</sup> Cat. 134 and 135.

allow more space on the fourth side for Titus' name and filiation.<sup>223</sup> Cat. 138 identifies each consul by only his cognomen; however, the abbreviations are not three letters, but five or six and separated by *ET*. On six of the latest dated Principate examples, at least one consul has all three of his names abbreviated.<sup>224</sup> Cat. 142 (71 CE) includes all three names of Lucius Flavius Fimbria (*L.FLAVIO.FIM*), and his co-consul Gaius Attius Barbarus is identified by abbreviating his praenomen and nomen (*C.ATTI*). Cat. 144 abbreviates all three names of both consuls of 83 CE: *C.FISIO.SABIN.M.ANNIO.MESSAL*. At 88 mm long, this *tessera* is one of the longest preserved examples. The added length provides space for abbreviating all three names of both consuls.

There is no discernable pattern for abbreviating a consul's nomen or cognomen when he has three names. In some instances the same consul is named in two different ways on *tesserae* dated to the same year. The tables below provide an overview of the frequency of the combinations of abbreviations: both consuls named by praenomen and cognomen; both named by praenomen and nomen; one consul named by praenomen and nomen, the other by praenomen and cognomen. These tables illustrate the lack of a clear pattern for abbreviating the names of the consuls, a striking laxity but typical enough of Roman naming practices.

#### Section 6.4.5.1 Praenomen and Cognomen for both Consuls (Table 6.1)

The least frequent pairing of abbreviations is both consuls identified by their praenomen and a cognomen. Only twenty-one *tesserae* have this naming pattern. The use of praenomen and cognomen is particularly prevalent for the Metellus branch of the Caecilius family.<sup>225</sup> Even when

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<sup>223</sup> Cat. 143.

<sup>224</sup> Cat. 131 (42 CE), 136 (51 CE), 139 (71 CE), 141 (71 CE), 142 (71 CE), 144 (83 CE).

<sup>225</sup> This is unsurprising given Syme's (1958), 172, observation that *nobiles* "in formal or honorific address," were named by their *praenomen* and *cognomen*. He lists "M. Metellus" as a prime example. There are notable exceptions to this preference among the *nobiles*, to which Shackleton Bailey (1995), 1, draws attention. See Cat. 6, 21, 33-36, 42, 57 for examples on *tesserae*.

Quintus Caecilius Metellus Pius Scipio Nasica is interrex in 53 BCE, no reference to his *nomen* is recorded.

<i>Cat. #</i>	<i>Date</i>	<i>Provenance</i>	<i>Consuls' names on tessera</i>	<i>Consuls' full names</i>
6	80 BCE	Rome?	<i>L SUL</i> <i>Q MET</i>	Lucius Cornelius Sulla Felix Quintus Caecilius Metellus Pius
13, 15, 16	71 BCE	No record, No record, Rome?	<i>P LEN</i> or <i>P LENT</i> <i>CN ORE</i>	Publius Cornelius Lentulus Sura Gnaeus Aufidius Orestes
21	68 BCE	Rome?	<i>Q REG</i> <i>L MET</i>	Quintus Marcus Rex Lucius Caecilius Metellus
26, 27, 28	62 BCE	No record, Rome, Rome ?	<i>D SIL</i> <i>L MUR</i>	Decimus Iunius Silanus Lucius Licinius Murena
29, 30	61 BCE	near Rome, Rome	<i>M PIS</i> <i>M MES</i>	Marcus Pupius Piso Frugi Calpurnianus Marcus Valerius Messalla Niger
41	57 BCE	Rome	<i>P LEN</i> <i>Q MET</i>	Publius Cornelius Lentulus Spinther Quintus Caecilius Metellus Nepos
46	56 BCE	Tannetum	<i>CN LE</i> <i>L PHIL</i>	Gnaeus Cornelius Lentulus Marcellinus Lucius Marcus Philippus
68, 69, 70	42 BCE	Rome ?, No record, No record	<i>M LEP</i> or <i>M LEPI</i> <i>L PLA</i>	Marcus Aemilius Lepidus Lucius Munatius Plancus
91	3 BCE	Rome ?	<i>L LENT</i> <i>M MES</i>	Lucius Cornelius Lentulus Marcus Valerius Messalla Messalinus
93	1 BCE	Rome?	<i>COSS LENT</i> <i>L PIS</i>	Cossus Cornelius Lentulus Lucius Calpurnius Piso Augur
116, 117	15 CE	No record, Rome?	<i>DRUS C</i> <i>M SIL</i>	Drusus Iulius Caesar Marcus Iunius Silanus
128, 129	33 CE	No record, No record	<i>L SULL</i> or <i>L SULLA</i> <i>L SULP</i>	Lucius Cornelius Sulla Felix Lucius Livius Ocella Servius Sulpicius Galba

Table 6.1 Both consuls named by their praenomena and cognomina, following Cooley's reconstruction of the consular *fasti*.<sup>226</sup>

#### Section 6.4.5.2 Praenomen and Nomen for both Consuls (Table 6.2)

On forty-five *tesserae*, the consuls are named by their praenomen and nomen. In only nine of these cases does one or both consuls lack a cognomen (Table 6.2). The cognomen Ahenobarbus is never abbreviated; instead, it is the nomen Domitius that is abbreviated after the consul's praenomen.<sup>227</sup>

<sup>226</sup> Cooley (2012), 449-487.

<sup>227</sup> According to Shackleton Bailey (1995), 2, this is one of the exceptional cases of *nobiles* who are identified in Cicero by *praenomen* and *nomen*, rather than *praenomen* and *cognomen*. He also mentions the Cassii Longini and Sulpicii Rufi as identified by *praenomen* and *nomen*. This practice aligns with how members of these families are presented as consuls on the *tesserae*: Cat. 1-2, 48-49, 58, 111.

<i>Cat #</i>	<i>Date</i>	<i>Provenance</i>	<i>Consuls' names on tesserae</i>	<i>Consuls' full names</i>
1	96 BCE	Rome?	<i>CN DOMIT</i> <i>C CAS</i>	Gnaeus Domitius Ahenobarbus Gaius Cassius (Longinus?)
2	94 BCE	Rome	<i>C COIL</i> <i>L DOM</i>	Gaius Coelius Calvus Lucius Domitius Ahenobarbus
3	93 BCE	Tarracina	<i>C VAL</i> <i>M HER</i>	Gaius Valerius Flaccus Marcus Herennius
4	86 BCE	near Capua	<i>L CORN</i> <i>L VAL</i>	Lucius Cornelius Cinna Lucius Valerius Flaccus
11	73 BCE	Rome?	<i>M TEREN</i> <i>C CAS</i>	Marcus Terentius Varro Lucullus Gaius Cassius (Longinus ?)
23, 24, 25	63 BCE	Rome, Arelate, Rome ?	<i>M TUL</i> <i>C ANT</i>	Marcus Tullius Cicero Gaius Antonius (Hibrida)
43, 44, 45	56 BCE	Rome, Faesulae, Rome ?	<i>CN COR</i> <i>L MAR</i>	Gnaeus Cornelius Lentulus Marcellinus Lucius Marcus Philippus
47	55 BCE	Rome, Temple of Magna Mater	<i>CN PO</i> <i>MLI</i>	Gnaeus Pompeius Marcus Licinius Crassus Dives
48, 49	54 BCE	Rome ?, Rome ?	<i>L DOM</i> <i>AP CLA</i>	Lucius Domitius Ahenobarbus Appius Claudius Pulcher
52	53 BCE	Rome ?	<i>M VAL</i> <i>CN DOM</i>	Marcus Valerius Messalla Rufus Gnaeus Domitius Calvinus
58	51 BCE	Rome	<i>SER SUL</i> <i>M CLA</i>	Servius Sulpicius Rufus Marcus Claudius Marcellus
59	50 BCE	Rome	<i>L AEM</i> <i>C CLA</i>	Lucius Aemilius (Lepidus) Paullus Gaius Claudius Marcellus
61, 62	48 BCE	Pompeii, Rome	<i>C IUL</i> <i>P SER</i>	Gaius Iulius Caesar Publius Servilius Isauricus
63	47 BCE	Rome	<i>Q FUF</i> <i>P VAT</i>	Quintus Fufius Calenus Publius Vatinius
65, 66	46 BCE	Rome ?, Rome ?	<i>C IUL</i> <i>MA AEM</i>	Gaius Iulius Caesar Marcus Aemilius Lepidus
71	33 BCE	Rome	<i>L VIN</i> <i>Q LAR</i>	Lucius Vinicius Quintus Laronius
86	9 BCE	No record	<i>NER CLAU</i> <i>T QUINT</i>	Nero Claudius Drusus Tiberius Quinctius Crispinus Sulpicianus
90	4 BCE	Ephesus	<i>L PAS</i> <i>C CAL</i>	Lucius Passienus Rufus Gaius Calvisius Sabinus
92	2 BCE	Rome ?	<i>L CAN</i> <i>Q FABR</i>	Lucius Caninius Gallus Quintus Fabricius
94, 95	3 CE	Rome ?, Rome ?	<i>L AEL</i> <i>M SERV</i> or <i>M SERVIL</i>	Lucius Aelius Lamia Marcus Servilius
96	3 CE	No record	<i>P SIL</i> <i>L VOLUS</i>	Publius Silius Lucius Volusius Saturninus
97	4 CE	Aquileia	<i>SEX AEL</i> <i>C SENT</i>	Sextus Aelius Catus Gaius Sentius Saturninus
98, 99	5 CE	Rome ?, Florence ?	<i>C VIB</i> <i>C ATEI</i>	Gaius Vibius Postumus Gaius Ateius Capito
107	8 CE	Rome	<i>M FUR</i> <i>SEX NON</i>	Marcus Furius Camillus Sextus Nonius Quinctilianus
111	11 CE	No record	<i>L CASS</i> <i>T STAT</i>	Lucius Cassius Longinus Titus Statilius Taurus
112, 113	13 CE	No record, Rome ?	<i>C SIL</i>	Gaius Silius A. Caecina Largus <sup>228</sup>

<sup>228</sup> Cooley (2012), 459 n. 7.

119	24 CE	No record	<i>L MUN</i> <i>SER COR</i> <i>L VIS</i>	Lucius Munatius Plancus Servius Cornelius Cethegus Lucius Visellius Varro
121	25 CE	Rome ?	<i>M ASIN</i> <i>C PET</i>	Marcus Asinius Agrippa Gaius Petronius (Umbrinus?)
122	26 CE	Rome ?	<i>Q IUN</i> <i>L ANT</i>	Quintus Iunius Blaesus Lucius Antistius Vetus
123	29 CE	No record	<i>L RUB</i> <i>C FUF</i>	Lucius Rubellius Geminus Gaius Fufius Geminus
130	39 CE	Rome ?	<i>C CAESAR</i> <i>L AP</i>	Gaius Caesar Augustus Germanicus Lucius Apronius Caesianus
132, 133	44 CE	No record, No record	<i>T STAT</i> <i>C SAL or C SALL</i>	Titus Statilius Taurus Gaius (Sallustius) Crispus Passienus
139	66 CE	Rome ?	<i>M VETTIO</i> <i>M ARR</i>	Marcus Vettius Bolanus Marcus Arruntius Aquila
140	68 CE	No record	<i>TI CATIO</i> <i>P CAELER</i>	Tiberius Catus Asconius Silius Italicus Publius Galerius Trachalus

Table 6.2 Consuls named by their praenomina and nomina.

### Section 6.4.5.3 Praenomen and Nomen for One Consul, Praenomen and Cognomen for the Other (Table 6.3)

Forty-one of the 145 datable *tesserae* name one consul by his praenomen and nomen and the other consul by his praenomen and a cognomen. In seventeen of these cases, one consul lacks a cognomen.<sup>229</sup> In the case of Pompey, on all four *tesserae* dating to one of his two consulships with Crassus, he is named by his nomen, while Crassus by his nomen (Cat. 47) or his cognomen (Cat. 17-19). In 14 BCE, Marcus Licinius Crassus Frugi, the adoptive son of the grandson of the triumvir Marcus Licinius Crassus, is identified by his adoptive nomen Licinius.<sup>230</sup> The cognomen Caesar is not abbreviated until it becomes part of the imperial family's nomenclature. Lucius Iulius Caesar (in 64 BCE) and Gaius Iulius Caesar (in 59 BCE) are named by their praenomina and nomen.<sup>231</sup>

<i>Cat #</i>	<i>Date</i>	<i>Provenance</i>	<i>Consuls' names on tessera</i>	<i>Consuls' full names</i>
5	85 BCE	Venice ?	<i>L CIN</i> <i>CN PA</i>	Lucius Cornelius Cinna Gnaeus Papirius Carbo

<sup>229</sup> Cat. 8-10, 33-36, 39-41, 67, 82-83, 100, 102, 123-24.

<sup>230</sup> Cat. 84.

<sup>231</sup> See Cat. 22 and 36-37.

8, 9, 10	76 BCE	No record, Faesulae, Rome	<i>CN OCT</i> <i>C CUR</i>	Gnaeus Octavius Gaius Scribonius Curio
12	72 BCE	Agrigentum ?	<i>L GEL</i> <i>CN LEN</i>	Lucius Gellius Publicola Gnaeus Cornelius Lentulus Clodianus
14	71 BCE	Capua	<i>P LENT</i> <i>CN AUFID</i>	Publius Cornelius Lentulus Sura Gnaeus Aufidius Orestes
17, 18, 19	70 or 55 BCE	Rome, Rome ?, Rome ?	<i>CN PO</i> or <i>CN POM</i> <i>M CR</i> or <i>M CRA</i>	Gnaeus Pompeius Marcus Licinius Crassus
22	64 BCE	Rome	<i>L IUL</i> <i>C FIG</i>	Lucius Iulius Caesar Gaius Marcius Figulus
32, 33, 34, 35	60 BCE	Rome, No record, Rome ?, Verona ?	<i>L AFR</i> <i>Q MET</i>	Lucius Afranius Quintus Caecilius Metellus Celer
36, 37	59 BCE	No record, No record	<i>C IUL</i> <i>M BIB</i>	Gaius Iulius Caesar Marcus Calpurnius Bibulus
38, 39, 40	58 BCE	Rome ?, Rome, No record	<i>L PIS</i> <i>A GAB</i>	Lucius Calpurnius Piso Caesoninus Aulus Gabinius
57	52 BCE	Rome	<i>CN POM</i> <i>Q ME</i>	Gnaeus Pompeius Quintus Caecilius Metellus Pius Scipio Nasica
60	50 BCE	Rome	<i>L PAUL</i> <i>C CLA</i>	Lucius Aemilius (Lepidus) Paullus Gaius Claudius Marcellus
67	44 BCE	No record	<i>M ANT</i> <i>P DO</i>	Marcus Antonius Publius Cornelius Dolabella
82, 83	17 BCE	Rome, Hadrumetum	<i>C FURN</i> <i>C SIL</i> or <i>C SILA</i>	Gaius Furnius Gaius Iunius Silanus
84	14 BCE	No record	<i>M LICIN</i> <i>CN LENT</i>	Marcus Licinius Crassus Gnaeus Cornelius Lentulus
87	8 BCE	No record	<i>C ASIN</i> <i>C CENS</i>	Gaius Asinius Gallus Gaius Marcius Censorinus
88	7 BCE	Florence ?	<i>TI CLAU</i> <i>CN PISON</i>	Tiberius Claudius Nero Gnaeus Calpurnius Piso
100, 102, 103	6 CE	Rome ?, Rome, No record	<i>M LEPID</i> or <i>M LEP</i> <i>L ARRUN</i> or <i>L ARR</i>	Marcus Aemilius Lepidus Lucius Arruntius
104, 105	6 CE	No record, Rome ?	<i>M LEP</i> <i>L NON</i> or <i>L NONI</i>	Marcus Aemilius Lepidus Lucius Nonius Asprenas
106	7 CE	Rome ?	<i>A LIC</i> <i>Q CRET</i>	Aulus Licinius Nerva Silanus Quintus Caecilius Metellus Creticus Silanus
108	10 CE	Naples ?	<i>SER LENT</i> <i>Q IUN</i>	Servius Cornelius Lentulus Maluginensis Quintus Iunius Blaesus
109, 110	11 CE	No record, Rome ?	<i>M' LEP</i> <i>T STAT</i>	Manius Aemilius Lepidus Titus Statilius Taurus
114, 115	15 CE	Rome ?, No record	<i>DRUS C</i> <i>C NORB</i>	Drusus Iulius Caesar Gaius Norbanus Flaccus
118	19 CE	Rome ?	<i>M SIL</i> <i>L NORB</i>	Marcus Iunius Silanus Torquatus Lucius Norbanus Balbus
124, 125	29 CE	No record, Rome ?	<i>L ASPR</i> <i>A PLAUT</i>	Lucius Nonius Asprenas Aulus Plautius

Table 6.3. One consul named by praenomen and nomen, the other by praenomen and cognomen.

#### Section 6.4.5.4 Inconsistent Naming Conventions

Some curiosities emerge during the Republican period. A consul may not be named identically on different *tesserae*: Lucius Cornelius Cinna is named by praenomen and nomen in

86 BCE, but by his praenomen and cognomen the following year.<sup>232</sup> Marcus Aemilius Lepidus is named by his praenomen and cognomen in each of the years he was consul, except on two *tesserae* dated to 46 BCE (when he was consul with Caesar) where both consuls are named by their praenomen and nomen (*C.IUL.M.AEM*), counter to all other examples.<sup>233</sup> On the three *tesserae* dated to 42 BCE, Lepidus is named as *M.LEP*, and his co-consul Lucius Munatius Plancus is also identified by praenomen and cognomen.<sup>234</sup> On three examples dated to 56 BCE, two of which were found in Rome and the other in Faesulae (modern Fiesole), both consuls, Gnaeus Cornelius Lentulus Marcellinus and Lucius Marcius Philippus, are named by praenomen and nomen (*CN.COR.L.MAR*); yet on a fourth *tessera* from the same year (found in Tannetum) they are instead both named by praenomen and cognomen (*CN.LE.L.PHIL*). This also happens to be the only one of these four *tesserae* to include the abbreviation *COS* after the truncated names.<sup>235</sup> On *tesserae* dating to 71 BCE, Gnaeus Aufidius Orestes is named in two different ways: on one from Capua by praenomen and nomen (*CN.AUFID*), on three others by praenomen and cognomen (*CN.ORE*).<sup>236</sup> On Cat. 16, although referred to by his praenomen and cognomen as on Cat. 13 and 15, Orestes' cognomen is abbreviated as *HOR* instead of *ORE*. In contrast to such variety, Orestes' fellow consul, Publius Cornelius Lentulus Sura, is named by abbreviations of praenomen and cognomen on all four. On two *tesserae* from 50 BCE, Lucius Aemilius Lepidus Paullus is named either by praenomen and nomen (*L.AEM*) or by praenomen and final cognomen (*L.PAUL*), while his fellow consul Gaius Claudius Marcellus is named by praenomen

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<sup>232</sup> See Table 6.2: Cat. 4 and Table 6.3: Cat. 5.

<sup>233</sup> Table 6.2 Cat. 65 and 66.

<sup>234</sup> See Table 6.1: Cat. 68, 69 and 70.

<sup>235</sup> See Table 6.1: Cat. 46; Table 6.2: 43-45.

<sup>236</sup> See Table 6.1: Cat. 13, 15, 16 and Table 6.3: Cat. 14.

and nomen on both (*C.CLA*).<sup>237</sup> It is unusual that a consul has more than one cognomen and is named by a later one. However, this does happen in 50 BCE, 7 CE, 32 and 33 CE.<sup>238</sup>

The order of the consuls is generally consistent on the *tesserae* dating to their year, even if the name forms used are inconsistent.<sup>239</sup> There are two notable exceptions, however to this general pattern. First, is Cat. 101 (6 CE) with its fourth side damaged at the right end. Given the preservation of the date on the third side (Kalends of February), it is clear that the consuls are Marcus Aemilius Lepidus and Lucius Arruntius; yet only *L.ARRUN.M* is legible. On the three other *tesserae* with this pair of consuls, Marcus Aemilius Lepidus is named first.<sup>240</sup> Second, on two *tesserae* dating to 33 CE, the consuls are named in a different order, although both with their praenomen and cognomen. However, on one (Cat. 128) Lucius Cornelius Sulla Felix is named in first place as *L.SULL*, but on the other (Cat. 129) as *L.SULLA* after Lucius Livius Ocella Servius Sulpicius Galba (*L.SULP* on both *tesserae*).

The order of the consuls on the *tesserae* generally corresponds to the order on other inscriptions during the Republic.<sup>241</sup> Republican *tesserae* (before 44 BCE) agree with the order of consuls recorded in the *Fasti Capitolini*, except for *tesserae* dated to 60 BCE (Cat. 32-35). Another (Cat. 52) dated to January 28, 53 BCE, names the consuls who were not elected until the middle of the year. If the *tessera* remained with its object throughout the year, the consuls could

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<sup>237</sup> See Table 6.2: Cat. 59 and Table 6.3: Cat. 60.

<sup>238</sup> On Cat. 106 (7 CE) Quintus Caecilius Metellus Creticus Silanus named as *Q.CRET*. On Cat. 126 and 127 (32 CE) Lucius Arruntius Furius Camillus Scribonianus is named as *CAM.ARR*. On Cat. 128 and 129 (33 CE) Lucius Livius Ocella Servius Sulpicius Galba is identified as *L.SULP*.

<sup>239</sup> The consuls are named in the same order on Cat. 8-10, 13-16, 17-19, 23-25, 26-28, 29-30, 32-35, 36-37, 38-40, 43-46, 48-49, 61-62, 65-66, 68-70, 82-83, 94-95, 98-99, 104-105, 109-110, 112-113, 114-115, 116-117, 124-125, 132-133.

<sup>240</sup> Cat. 100, 102-103.

<sup>241</sup> Noted keenly by Taylor and Broughton (1968), 170-171.



have been filled in after they were elected. There are a greater number of discrepancies during the Principate between the order of the consuls on the *tesserae* compared to the order in consular *fasti*. Fifteen *tesserae* dating to eleven different years reflect suffect consuls named before ordinary consuls contrary to consular *fasti*.<sup>242</sup> On the whole, however, there is considerable agreement between the order of consuls on the *tesserae* and in the *Fasti Capitolini*.

### 6.5 Days of the Month

In his examination of the dates attested on the *tesserae*, Herzog observed that while there was a wide range of dates recorded, the Kalends, Ides, and Nones were more often attested than others.<sup>243</sup> The *tesserae* published since his initial study have confirmed these observations, with the numbers of those that fall on the Kalends, Ides or Nones increasing by about 50%.<sup>244</sup> These days of the month account for 68% of the corpus with specific dates (Table 6.4 below). Forty-one of Herzog's *tesserae* either lack a record of the day and the month, or their inscription is illegible.<sup>245</sup> Notable are those *tesserae* that intentionally do not record a specific day of the month. Some feature additional incised decoration and omit dates: Cat. 3 (93 BCE) has such decoration (bundle of lightning rods) on its second side and *SPECTAVIT* alone on the third. Undated examples appear to prefer additional decoration to including dates.<sup>246</sup> Five others use the abbreviation *M*, *ME*, or *MEN* for *mense* and omit a specific day of the month.<sup>247</sup> Two *tesserae* date to the intercalary month of a given year.<sup>248</sup> On one other (Cat. 31) only the

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<sup>242</sup> Cat. 87 (8 BCE), 90 (4 BCE), 101 (6 CE), 106 (7 CE), 111 (11 CE), 123-125 (29 CE), 126-127 (32 CE), 128 (33 CE), 134-135 (45 CE), 139 (66 CE), 144 (83 CE).

<sup>243</sup> See Herzog (1919), 41.

<sup>244</sup> Herzog (1919), 4, found 38 dated to the Kalends, 7 to the Nones, and 17 to the Ides. Since, these numbers have increased to 57, 10, and 30.

<sup>245</sup> Cat. 1, 3, 24, 31, 39, 42, 46, 81, 129, 151-157, 160-179, 181-184.

<sup>246</sup> Cat. 152, 154-155, 157, 160, 174, 176.

<sup>247</sup> Cat. 1, 24, 46, 81, 85.

<sup>248</sup> Cat. 47 dates to the Kalends of the intercalary month in 55 BCE, while Cat. 65 dates to the Ides of the intercalary

abbreviation for the month (*QUI*) can be reconstructed. On two more, only the day can be reconstructed but not the month.<sup>249</sup>

Of the 143 examples precisely datable to a day and month, in ninety-seven instances the day is the Kalends, Ides or Nones (Table 6.4). Most commonly named is the Kalends, with nineteen Republican examples, thirty-six Imperial and two undated as to year. The Ides occur next most often with fifteen Republican, twelve Imperial and three undatable examples. For the Nones, there are three Republican, six Imperial and one undated example.

Month	Kalends	Nones	Ides	Other Dates	Total
<b>Ianuarius</b>	12	2	3	9: 8 <sup>th</sup> (13), 9 <sup>th</sup> (53), 10 <sup>th</sup> (21), 17 <sup>th</sup> (100), 21 <sup>st</sup> (43), 26 <sup>th</sup> (158), 27 <sup>th</sup> (32), 28 <sup>th</sup> (52), 30 <sup>th</sup> (106)	26
<b>Februarius</b>	6	2	1	2: 24 <sup>th</sup> (44, 147)	11
<b>Martius</b>	2	0	0	9: 4 <sup>th</sup> (6, 86), 24 <sup>th</sup> (36, 72), 25 <sup>th</sup> (33, 41), 26 <sup>th</sup> (20, 49, 126)	11
<b>Aprilis</b>	14	2	3	6: 7 <sup>th</sup> (17), 16 <sup>th</sup> (16), 20 <sup>th</sup> (127), 23 <sup>rd</sup> (8), 24 <sup>th</sup> (144), 29 <sup>th</sup> (55)	25
<b>Maius</b>	1	0	2	0	3
<b>Iunius</b>	2	0	5	1: 3 <sup>rd</sup> (128)	8
<b>Quinctilis/Iulius</b>	7	0	4	7: 10 <sup>th</sup> (28), 14 <sup>th</sup> (38), 17 <sup>th</sup> (30), 19 <sup>th</sup> (25), 20 <sup>th</sup> (142), 23 <sup>rd</sup> (99), 27 <sup>th</sup> (12)	18
<b>Sextilis/Augustus</b>	2	0	4	1: 4 <sup>th</sup> (15)	7
<b>September</b>	3	1	1	2: 24 <sup>th</sup> (50), 27 <sup>th</sup> (136)	7
<b>October</b>	3	2	2	5: 5 <sup>th</sup> (5, 145), 23 <sup>rd</sup> (11, 89), 30 <sup>th</sup> (74)	12
<b>November</b>	1	0	2	4: 15 <sup>th</sup> (96), 16 <sup>th</sup> (63), 18 <sup>th</sup> (105), 24 <sup>th</sup> (139)	7
<b>December</b>	3	0	1	0	4
<b>Intercalaris</b>	1	0	1	0	2
<b>Unknown Month</b>	0	1	1	0	2
<b>Totals</b>	57	10	30	46	143

Table 6.4. Days of the month inscribed on the *tesserae*. Catalog numbers are provided here (in parentheses) only for dates other than the Kalends, Nones, or Ides.

While the Nones is the least used of the three days, it is the only one of the three to appear in Type 1 (Cat. 2 from 94 BCE). Cat. 4 (86 BCE) and Cat. 7 (77 BCE) are also dated to the Nones. All these in fact predate the earliest examples dated to the Ides or the Kalends, which

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month in 46 BCE.

<sup>249</sup> Cat. 149 lists the Ides as the date, but the month was never inscribed. This *tessera* was not finished. Cat. 159 seems to indicate the Nones of a month beginning with *S*.

do not occur until 76 BCE (for both).<sup>250</sup>

Forty-six examples are not dated to the Kalends, Nones or Ides, and of their dates thirty-eight are unique within the corpus. March has the fewest examples dating to the Kalends, Ides or Nones. Instead, March 26<sup>th</sup> (*VII.K.APR*) is the most commonly attested day in that month with three examples: Cat. 20, 49, and 126. Three other dates appear twice: March 4<sup>th</sup> (*IV.N.MAR*) on Cat. 6 and 86, March 24<sup>th</sup> (*IX.K.AP*) on Cat. 36 and 72, and March 25<sup>th</sup> (*A.D.IIX.K.AP*) on Cat. 33 and 41. October is the only other month where dates other than the Kalends, Nones, or Ides appear on multiple *tesserae*: October 5<sup>th</sup> and 23<sup>rd</sup> are both attested twice.<sup>251</sup>

As evidence for his argument that these *tesserae* were used for the assaying of coins, Herzog noted that the Kalends and Ides were dates on which payments were known to be paid. Andreau cautioned that some examples record a date of the Kalends of January, a day on which payment would have been suspended.<sup>252</sup> Curiously, the Kalends of January is the second-most attested date with twelve examples, after the Kalends of April with fourteen examples. The third-most common date is the Kalends of July, with seven dated examples. It is nevertheless curious that twelve of Herzog's *tesserae* date to the Kalends of January. A satisfactory answer to this question remains elusive.

## 6.6 Textual Variations

Ten percent of the *tesserae* inscribed on all four sides do not follow the typical layout of text. The widest variation occurs on Type 3 examples, where eleven seem to name freedmen and give names in the nominative on the first and second sides.<sup>253</sup> Many of the differences occur on

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<sup>250</sup> Cat. 9-10.

<sup>251</sup> October 5<sup>th</sup> (*A.D.III.N.OC/III.NON.OCT*): Cat. 5 and 145. October 23<sup>rd</sup> (*X.K.NOI*): Cat. 11 and 89.

<sup>252</sup> Andreau (1987), 499, remarks that such suspension is problematic, but ventures no explanation for the frequency of this date.

<sup>253</sup> Cat. 51 (53 BCE), 84 (14 BCE), 88 (7 BCE), 89 (6 BCE), 93 (2 BCE), 105 (7 CE), 119 (24 CE), 124 (29 CE),

examples mentioning the Imperial family. Do the discrepancies in the inscriptions correlate with differences in form? What do these differences suggest about the manufacture and subsequent reception of these *tesserae*?

On eighteen *tesserae*, *SPECT* or *SPECTAVIT* appears alone on one side, while what typically appears on the first and second sides is compressed on the first side only. The earliest such examples that can be dated are Cat. 1 and 2, before the simplified abbreviation *SP* became common. On Cat. 2 the names of the consuls appear on the second side rather than the fourth. The Type 3 examples that bear *SPECT* alone on a side date to years when members of the Imperial family are consuls, for instance Cat. 86 of 9 BCE, when Drusus was consul along with Tiberius Quinctius Crispinus Sulpicianus. *SPECT* appears on its fourth side, while the consuls' names are inscribed on the third side. The day and month then occupy the second side, and the *tessera* is perforated from the second through to the fourth side.

Cat. 77 of 24 BCE has the abbreviation *SPECT* on the second side, and the consuls are named on the third side, leaving the month and day for the fourth side. Yet the perforation is still made through the second through to the fourth side. With the first or third side visible, perhaps the arrangement of the inscriptions throughout was altered to highlight the consuls: Augustus for the tenth time, and Gaius Norbanus.

At least eight *tesserae* leave entire sides blank. On only two of these is there evidence that the sides lacking an inscription were to be filled with text.<sup>254</sup> Five examples provide no evidence that the text was to be completed, nor was additional decoration introduced to fill the space. I draw a distinction here between examples with sides left completely blank and those

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138 (66 CE), 145 (undatable), 166 (undatable).

<sup>254</sup> Cat. 149 and 150 show that inscriber began laying out the inscriptions (faint traces of letters are visible), but they were never completed.

damaged and rendered illegible. Cat. 25, for instance, is lacking an inscription on the first two sides, yet has the date inscribed. Cat. 51 has a blank second side, but seems to name a free person or freedman on the first side. Cat. 53 and 147 lack consular dates. Cat. 151 is not inscribed on the second through fourth sides. Cat. 174 too evidently has no inscription on one of its sides, but I have only seen photos of the three sides with text or decoration. I have not studied Cat. 39, 63, and 129, so I cannot comment on the intentionality of any omissions on them. It is equally possible that these *tesserae* were never completed or used.

Cat. 53 lacks an inscription on its fourth side. Herzog proposed a date of 53 or 52 BCE, when consuls had yet to be elected at the beginning of the year.<sup>255</sup> This is a plausible hypothesis. While the incised decoration, script and orientation of the text on each side does indicate a mid-first century date, the absence of consuls cannot indicate a particular year. 55 BCE could be another possible year for Cat. 53, given that the month is January, before Pompey and Crassus were elected.<sup>256</sup> Alternatively, this example was used without recording the consuls.

One *tessera* (Cat. 85) has variations in both physical form and textual inscriptions. It is from a tomb at Mutina (modern Modena) and dated to 13 BCE, but the rest of the burial artifacts are dated to the second half of the second century CE.<sup>257</sup> The barrel shaped head is unique, but it is still perforated from the second through to the fourth sides. However, the inscriptions on the first, second and third sides do not follow the typical pattern. The first side has names in the nominative and genitive: *CHILO...ANI P.*<sup>258</sup> The second side reads *SP(ectvait) M(ense) APRI(le)*, thus lacking a day of the month. The third side is filled by *TI CLAV NERO*, while the

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<sup>255</sup> Herzog (1937), col. 1426.

<sup>256</sup> Wiseman (1994), 397.

<sup>257</sup> Benassi (2011), 71.

<sup>258</sup> See Buonopane (2017), 219, for an updated reading of the text.

name of the other consul, Publius Quintilius Varus, and the abbreviation for consul is placed on the fourth side.

Those examples where the text does not follow the typical pattern suggest that the name on the first side and content on the third were meant to be viewed. Hence the three examples that name members of the Imperial family have their names on the third side, instead of *SP*, *SPECT*, or *SPECTAVIT* alone occupying it. This is moved rather to the second or fourth sides: compare the Type 1 example Cat. 1 which records *SPECT* on its fourth side. Thus, the act of inspecting or observing is less important than the agent who performs the task and the emperor.

These examples with textual variations certainly demonstrate an intention to set the Imperial family above the other consuls. Additionally, each such Imperial example was recovered outside Rome, in either Campania or Aemilia. Perhaps they sought to emphasize the role of the Imperial family as a sign of deference or allegiance.

### **6.7 Individuals Named on Herzog's *Tesserae***

Werner Eck argues that most prosopography “could not have been written without epigraphical sources,” while noting that numismatic, papyrological, and ancient texts “are taken into account as well.”<sup>259</sup> Herzog's *tesserae* might in principle serve as an optimal case study and source for individuals who are not otherwise named. However, the formulaic nature of the nomenclature can prove an obstacle. This section explores the identities of the individuals and families named on the first and second sides, but it does not offer a prosopography of those named on the *tesserae*. Instead, it is an “applied” prosopography, seeking to find connections between the slaves named on the first side and the families named on the second side.<sup>260</sup> Prosopography and

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<sup>259</sup> Eck (2003), 16.

<sup>260</sup> Salomies (2001), 74, gives an overview of the term “prosopography”- its traditional definition and applications.

onomastic approaches are combined to chart the enterprises and origins of those named on the *tesserae*.

Predictably, the prosopography of family names occupying the second side of the *tesserae* has been the starting point for scholars who have worked with them; yet each has assigned varying levels of accuracy to the identification of these families. Until relatively recently prosopography mostly focused on the upper echelons of Roman society – senators, equites, Imperial staff (including some freedmen). They and their families are more likely to be mentioned on monuments, so the epigraphic record for them is richer. By contrast, the attestations of slave names are far fewer. Eck warns, rightly, that conclusions cannot be drawn based upon the absence of published epigraphic evidence.<sup>261</sup>

Herzog's *tesserae* notably lack abbreviations for *praenomina* and *congnomina* of the owners on their second side. As Olli Salomies argues, "inscriptions do not normally use the full nomenclature of persons mentioned only incidentally."<sup>262</sup> Here, only the *nomen* of the owner is inscribed, thereby widening the net of possible identities for the male owners, as do common *nomina* that appear on the *tesserae* (e.g. Iulius).<sup>263</sup> Three *tesserae* name female owners (Cat. 102, 107, and 128). Even for the relatively rare noble *nomen* Atreius, only found on five inscriptions total, it is impossible to identify further the individual named on Cat. 70 because praenomen and cognomen are lacking.<sup>264</sup> Yet Herzog, and Wiseman more cautiously, argue for the association of

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<sup>261</sup> Eck (2003), 20-21.

<sup>262</sup> Salomies (2001), 86.

<sup>263</sup> Syme (1958), 172, notes the frequency of an individual being named by one name alone, either the *nomen* or *congnumen*, as the praenomen fell out of fashion by the late Republic. See also Shackleton Bailey's comments about identifying those named in Cicero's letters when two of the names are mentioned, (1995), 1. On the need for caution when identifying individuals solely by *nomen*, see Salomies (2001), 77.

<sup>264</sup> Note Buonopane's (2019b), 65, reluctance to identify further the Atreius named on Cat. 70. For the rarity of the *nomen*, see Salomies (1994), 26.

families named on the *tesserae* with commercial affairs either by the family named or by a relation.<sup>265</sup> Andreau remains dubious about such identifications, arguing that “prosopography is of little use to us. It does not make it possible to identify the group of financiers who owned the slaves on the *tesserae*.”<sup>266</sup> He, unlike Herzog and Wiseman, believes it “too risky” to identify C. Octavius as the grandfather of Augustus, or the *tesserae* bearing the family name Caecilius as naming Atticus.<sup>267</sup> Use of the nominative and the lack of owners’ full nomenclature would suggest that they are mentioned merely to further identify the named slave.

### Section 6.8 Names in the Nominative

All names inscribed on the first side are in the Latin alphabet. Names of Greek and Semitic origin are transliterated. For approximately 85% of the corpus (160 out of 184), there is a single name in the nominative inscribed. To judge by the onomastics of their names and by prosopography, those individuals named in the nominative appear to be slaves or freedmen. The abbreviation *S* or word *SERVUS* rarely appears on the *tesserae*.<sup>268</sup> *L* or *LIBERTUS* appears on one example (Cat. 168). 136 unique names appear in the nominative. In addition, thirteen names cannot be reconstructed due to incomplete inscriptions or damage to the first side.<sup>269</sup> In eleven instances, individuals are identified who have more than one name in the nominative (Table 6.5).

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<sup>265</sup> Herzog (1937); Wiseman (1971), 85 and Appendix IV.C.

<sup>266</sup> Andreau (1999), 87.

<sup>267</sup> For Caecilius: Cat. 56 (52 BCE) and Cat. 74 (26 BCE). C. Octavius: Cat. 51 (53 BCE). One only needs to look at the family tree for the Caecilii Metelli to note the complexities of identifying one individual there: Syme (1986), Appendix 1: The Metelli. There are multiple members of the Caecilii who could be named on Cat. 56. Cf. Zmeskal (2009), “Caecilii” 48-55; Broughton *MRR2* (1952), 200 for L. Caecilius Rufus (110), praetor 57 BCE.

<sup>268</sup> n. 198, 199 above. There are thirteen examples bearing the abbreviation *S*. *SERVUS*: Cat. 170.

<sup>269</sup> Cat. 7 (77 BCE), 25 (63 BCE), 31 (61 or 53 BCE), 39 (58 BCE), 42 (57 BCE), 72 (27 BCE), 75 (25 BCE), 85 (13 BCE), 129 (33 CE), 149-151 (undated), 179 (undated).



Section 6.8.1 Freedmen? (Table 6.5)

Approximately 5% of *tesserae* (11 of the 184) have either two or three names in the nominative inscribed on the first side or spread across the first two sides (Table 6.5 below). Exceptionally, the earliest example (Cat. 51), dated to 53 BCE, names *C. OCTAVIUS* on the first side and the second side is empty.<sup>270</sup> Given the appearance of multiple names in the nominative and absence of a genitive, it is likely that the individuals named are freedmen rather than slaves. The abbreviation *L (libertus)* appears only once (Cat. 168), thus the status of ten of the eleven remains unspecified. The other eight dated inscriptions seemingly naming freedmen are from the Imperial period, beginning with Lucius Stlaccius Bassus in 14 BCE (Cat. 84). Two undated *tesserae* naming a freedman are from the excavation at Magdalensberg (Cat. 166 and 168). Another from Aquileia possibly names a freedman (Cat. 173), but the text on the first side is impossible to reconstruct.<sup>271</sup> All the freedmen have Roman names, except M. Pilius Phoenix on Cat. 93. Four have *tria nomina*, with the praenomen abbreviated to a single letter.<sup>272</sup>

Cat. #	Date	First Side	Second Side	Solin (1996) Page Number
51	53 BCE	C. OCTAVIUS		
84	14 BCE	L. STLACCIUS	BASSUS	
88	7 BCE	SERVILIUS	CLEMES	
92	2 BCE	FLORONIUS	ROMANUS	
93	1 BCE	M. PILIUS	PHOENIX	583
106	7 CE	C. NUMITORIUS	NORBANUS	34
120	24 CE	[PR]OC[U]LUS	PRISCUS	
125	29 CE	LIBANUS	VALERI(US)	126
139	66 CE	CURTIUS	PROCULUS	140
166	Undated	L. STLACCIUS SECUNDUS		16
168	Undated	PRINCEPS.PECCI.L		136

Table 6.5. *Tesserae* naming freedmen, with two or three names in the nominative inscribed on the first two sides.

<sup>270</sup> It is the only one of the ten that names a *praenomen* and *nomen*, rather than *praenomen* and *cognomen*. Cf. Andreau (1999), 81.

<sup>271</sup> Zaccaria (1992), 37 no. 49, reads the first side as: *SECUN[... ] PUDENS*. I read only *SECU...PU...NS*.

<sup>272</sup> Aside from Cat. 84 mentioned above, see Cat. 93, 106, 166.

### Section 6.8.2 Origins of Names

Out of the remaining 173 *tesserae*, thirteen have illegible sections on the first side. Without doubt, there are more names of Greek origin than Latin. Eighty-nine *tesserae* name individuals with Greek names, sixty-two name ones with Latin names, two with Illyrian names and one with a Semitic name.<sup>273</sup> However, breakdown by period, Republic (96 BCE-33 BCE) and Principate (27 BCE-88 CE), presents a different picture. Names of Greek origin are abundant during the Republic, forty-nine in contrast to fifteen Latin. During the Principate, names of Latin origin outnumber those of Greek, thirty-five to twenty-seven. With the inclusion of the freedmen listed above, the number increases to forty-one Latin names and twenty-eight Greek. On undated *tesserae*, the origins of the names are almost evenly split between twelve Latin and thirteen Greek.

### Section 6.8.3 Magdalensberg Case Study

Curiously, no Celtic names appear in the corpus, despite the nine finds from Magdalensberg. One of these has an Illyrian name (Cat. 162), and another is of Greek origin (Cat. 163). Otherwise, seven names on the first side are Latin (Table 6.6). Perhaps the number of Latin names could reflect the influence of Italian merchants who moved to Magdalensberg/Virunum, or of those who conducted business in the region but remained based in Aquileia.

<b>Cat. #</b>	<b>Date</b>	<b>Name in Nominative</b>	<b>Origin</b>	<b>Solin (1996) Page #</b>
162	N/A	<i>LICCAIUS</i>	Illyrian	613
163	N/A	<i>ACASTUS</i>	Greek	323
164	N/A	<i>MANDATUS</i>	Latin	176
165	N/A	<i>BONO(sus)</i>	Latin	61
166	N/A	<i>L STLACCIUS SECUNDUS</i>	Latin	16
167	N/A	<i>DONATUS</i>	Latin	113
168	N/A	<i>PRINCEPS</i>	Latin	136
169	N/A	<i>AMOENUS</i>	Latin	76
170	N/A	<i>LAETUS</i>	Latin	76

Table 6.6. The origin of the names in the nominative on the *tesserae* from Magdalensberg.

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<sup>273</sup> These numbers are with reference to the classification Solin (1996) uses in his volumes on slave names. Solin (1996), 603, considers Malchio a Semitic name. Solin (1996), 613, classifies Gentius and Liccaius as Illyrian names. Solin (1996), 583, categorizes Phoenix as Greek.

### Section 6.8.4 Most Commonly Attested Names

Twenty-two names appear on multiple *tesserae*. Fourteen names appear on two. Philargurus (or alternatively Pilargurus) is the most common name on the first side, occurring five times between 70 BCE or 63 BCE (depending on the dating of Cat. 17) and 52 BCE (Table 6.7). A sixth example may also name a Philargurus, but it is damaged (Cat. 31). The three of these *tesserae* with a secure provenance were all recovered in Rome. Despite the tight date range, each *tessera* naming Philargurus has a different family named on the second side. In each of the five or six instances, a different individual could be named unless any transferred into the service of another family.

<b>Cat. #</b>	<b>Date</b>	<b>Slave Name</b>	<b>Second Side</b>	<b>Provenance</b>	<b>Solin (1996) page #</b>
17	70/55 BCE	<i>P(h)ilargurus</i>	Lucili	Rome	420
23	63 BCE		Epilli	Rome	
33	60 BCE		Fulvi	No record	
36	59 BCE		Procili	No record	
55	52 BCE		Aconi	Rome	
11	73BCE	<i>P(h)ilodamus</i>	Dosse	Once in Rome	232
177	undated		Ru Sab	No record	
13	71 BCE		Iuni	No record	
19	70/55 BCE		Gelli	Once in Rome	
52	53 BCE		Iuli	Purchased in Rome	
64	46BCE	<i>Pamp(h)ilus</i>	Servili	Rome	222
152	Undated		Cremut	No record	
155	Undated		Fulvi	Once in Rome	
156	Undated		Sociorum	Rome	
43	56 BCE	<i>Faustus</i>	Manli	Rome	
54	52 BCE		Hetrili	Rome	82
103	6 CE		Antoni	No record	
79	19 BCE	<i>Felix/Felicio</i>	Mundici	Rome	
107	8 CE		Rupiliae	Rome	
111	11 CE		Pomponi	Rome	
61	48 BCE	<i>Hilarus/Hilario</i>	Turpilini	Pompeii	71/75
73	26 BCE		Anni	No record	
74	26 BCE		Caecili	No record	
35	60 BCE	<i>Rufio</i>	Sertori	Verona ?	
47	55 BCE		Vevei	Rome	
66	46 BCE		Petili	Once in Rome	56
30	61 BCE	<i>Salvi(us)</i>	Persi	Rome	
37	59 BCE		Licini	No record	
142	71 CE		Calpurni	Rome	

Table 6.7 Most commonly attested names on the first side. The table is arranged by frequency of names and then alphabetically. Dates and provenance are provided where possible.

The same can be said for the second most frequent name, Philodamus (Pilodamus), found on five *tesserae* dated between 73 BCE and 53 BCE, with three possibly dated to the 70s BCE (Cat. 11, 13, 19). Again, five different families are named on the second side. Pamphilus (Pampilus) is the third most common name to appear on the first side, with four examples preserved. For each of these most common names, no family name is repeated. For five of the eight slave names that appear on three or more *tesserae*, the date range is 30 years or less, and in some cases could be as little as 14 years.

#### Section 6.8.5 Possible Identifications

Herzog was too rash in connecting eight slaves' and freedmen's names from Cicero's correspondence with Atticus to those on the *tesserae*.<sup>274</sup> Cary, following Herzog, acknowledges that "in some cases" these concurrences are no more than just "homonyms," and yet he goes on to argue that:

"it is even less likely that in eight separate cases we should have a coincidence of name without a coincidence of person...if only one or two persons named on the *tesserae* were identical with their namesakes in Cicero's letters, this would prove that they were engaged in banking business. But if this holds good of one or two, it may be accepted as true for the whole series."<sup>275</sup>

This type of reasoning is flawed for many reasons. While several of those named in Cicero's letters handled money, there are a few others who are not directly linked to financial activities. Several are merely messengers, delivering letters between Atticus and Cicero. Anteros is a messenger of Atticus, and Philotimus sends letters to Atticus while Cicero is proconsul of Cilicia.<sup>276</sup> Taking the entire group as indicative of banking and directly associating them with individuals attested on

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<sup>274</sup> Herzog (1919), 18.

<sup>275</sup> (1923), 111.

<sup>276</sup> *Ad Att.* 9.14.2 and 11.1.1; *Ad Att.* 6.1.9 and 6.3.1. Or overseas agents, such as Philogenes, a representative while Cicero is in Ephesus (*Ad Att.* 5.13.2), and Pelops of Byzantium (*Ad Att.* 14.8.1). These names are fairly common and need not suggest a direct link with *tesserae* that bear these names.

Herzog's *tesserae* would be erroneous. There is no direct link discernable to the households of Cicero or Atticus. It is plausible that those with accounting backgrounds could be the individuals named upon the first side of the *tesserae*, but they would have been slaves sold to a different family, since neither the *nomen* Pomponius nor Tullius is associated with the *tesserae* in question. There are to be sure three *tesserae* associated with the Pomponius family, but none of the names (Andrea, Liccaius, and Felicio)<sup>277</sup> on their first sides corresponds with names of slaves or freedmen in Cicero's letters to Atticus. Moreover, while two of the examples bearing the name Pomponius are undated, the third is dated to 11 CE (Cat. 111), well after Atticus' death, and one of the undated two was recovered from Magdalensberg (Cat. 162). It is unlikely that any of those *tesserae* associated with the Pomponius family could be tied directly to Atticus. And the likelihood that the *tessera* naming a member of the gens Caecilia is referring to Atticus is slim.<sup>278</sup>

It is highly speculative to create direct links between the *tesserae* and slaves and freedmen mentioned by Cicero, even though there remains a remote chance that a few individuals named on Herzog's *tesserae* are the same as those appearing in the letters. I set out the evidence, such as it is, in Table 6.8 below.

Name	Cicero <i>Ad. Att.</i>	Position	Date of Letter	Cat. #	<i>Tessera</i> Date	Side 2
<i>Philotimus</i>	6.1.9; 6.3.1	Messenger of Atticus	50 BCE	15 (spelled <i>Pilotimus</i> )	71 BCE	Hostili
<i>Salvius</i>	13.44.3	Bookkeeper of Atticus	45 BCE	30	61 BCE	Persi
<i>Anteros</i>	9.14.2; 11.1.1	Messenger of Atticus	49-8 BCE	45	59 BCE	Licini
<i>Pelops</i>	14.8.1	Agent in Byzantium	44 BCE	46	56 BCE	Acili
<i>Eros</i>	12.21.4	Financial clerk of Cicero	45 BCE	60	50 BCE	Manli
<i>Hilarus</i>	1.12.2	Book keeper of Atticus	61 BCE	61	48 BCE	Turpilini <sup>279</sup>
<i>Philogenes</i>	5.13.2	Agent in Ephesus	51 BCE	67	44 BCE	Alfi

Table 6.8 Names mentioned in Cicero's letters to Atticus that also appear on the first side of Herzog's *tesserae*.

<sup>277</sup> Cat. 111 (11 CE), 162 (undated), 176 (undated).

<sup>278</sup> See n. 267 above for the complexities of identifying a member of this family.

<sup>279</sup> This *tessera* was found in Pompeii Regio IX. *CIL* I<sup>2</sup> 937.

Cicero mentions Atticus' *ratiocinator*, or accountant, Hilarus, in a letter of 61 BCE.<sup>280</sup> A Hilarus is named on Cat. 61 dated to 48 BCE, either a slave or freedman of the seldom attested Turpilinus family.<sup>281</sup> Shackleton Bailey identifies Hilarus as a freedman of Cicero,<sup>282</sup> but it seems that the Hilarus named on the *tessera* is a slave, given the genitive on the second side. Another example concerns Eros, in charge of Cicero's finances according to a letter of 45 BCE,<sup>283</sup> who is connected with a Manlius on the *tessera* (Cat. 60) dated to 50 BCE. He could conceivably have been sold to, or gone to work for, Cicero in the five years in between. Shackleton Bailey argues that Eros was in fact Philotimus' slave, "given Philotimus' earlier involvement in Cicero's financial affairs, his slave in the first reference should be identified with the accountant in the rest. The man may have been transferred to Cicero and freed by him."<sup>284</sup> The name Philotimus could either refer to a freedman of Terentia or the freedman and clerk of Cicero.<sup>285</sup> In any case, the family name on the *tessera* naming Philotimus is Hostilius and is dated to 71 BCE.

The association of those named on Herzog's *tesserae* with slaves and freedmen named in Cicero's letters demonstrates the complexities faced when trying to identify slaves and freedmen. In most instances, there is one name, rather than two or three. The pool of sources naming slaves and freedmen is limited. Some scholars even consider slaves as invisible in the Roman archaeological record.<sup>286</sup> Epigraphically, slaves are most often mentioned upon their own

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<sup>280</sup> *Ad Att.* 1.12.2: *libertum ego habeo sane nequam hominem, Hilarum dico, ratiocinatorem et clientem tuum.*

<sup>281</sup> Solin and Salomies (1994), 192 and 415.

<sup>282</sup> Shackleton Bailey (1995), 55.

<sup>283</sup> *Ad Att.* 12.21.4.

<sup>284</sup> Shackleton Bailey (1995), 48. For Eros, Shackleton Bailey notes Plutarch, *Apophth. Cic.* 21.

<sup>285</sup> Shackleton Bailey (1995), 79-80, for the possible identifications of Philotimus.

<sup>286</sup> See George (1997), 15; Joshel and Petersen (2014), 4-6; Webster (2008), 110-111, and (2005), 161-179.

epitaphs.<sup>287</sup>

Altogether little documentary and literary evidence survives that specifically names slaves. Fortunately, much work has been done on piecing together inscriptional attestations,<sup>288</sup> especially by Heikki Solin who has assembled attestations of Roman, Greek, Celtic and Near Eastern slave names.<sup>289</sup> He has also published a catalogue of Greek names in the Roman world,<sup>290</sup> which includes all epigraphic and some literary attestations. His studies therefore are an invaluable resource for the study of slaves and freedmen named on Herzog's *tesserae*, even though inevitably omissions remain. While these volumes represent an enormous contribution to the field, they do not include every inscription of the names attested – a tall task to be sure.<sup>291</sup>

Solin clearly denotes not only the text of an inscription and information about its publication, but also its type: graffito, mark on pottery, and *tessera nummularia* (as they are referenced in his work). He also provides the names of the owners/patrons along with the reference to their slaves or freedmen and any other wording referring to the latter's official capacity. In his volumes on Greek personal names, Solin distinguishes between slaves, freedmen, and *incerti*. His periodization, even when approximate, assists searches for contemporary attestations of the slave or freedman names on Herzog's *tesserae*.

Using Solin's work as a starting point, along with online epigraphic databases, I have found

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<sup>287</sup> Joshel's (1992) study of occupational epitaphs from Rome explores the impetus for slaves to commemorate their work. See also Verboven (2012), 92, for a synthesis of the prevalence of slaves and freedmen on occupational epitaphs from Picenum, Delos, Spain and in the archives of the Sulpicii.

<sup>288</sup> See Aubert (1994), Appendix: Prosopography, 442-476, for his detailed prosopographical appendix of business managers attested in Latin epigraphy. He includes a category particularly devoted to the status of the named business managers.

<sup>289</sup> Solin (1996).

<sup>290</sup> Solin (2003).

<sup>291</sup> A name attested on many *tesserae* may have a reference to only one.

a few individuals named upon the first side of Herzog's *tesserae* who may be named on other inscriptions. While there is no guarantee of a match, I believe a better case can be made for these individuals than those mentioned in Cicero's letters, because they are mentioned along with a member of the family named upon the corresponding second side of a *tessera*. On Cat. 138 (61 CE) a Hermes owned by a member of the Vibius family could be the same individual named on an epitaph found in Rome: *C Vibius O L(ibertus) Herm[es]/ Ana Lucia P(ubli) L(iberta) Ana/ Vibia C(ai) L(iberta) Apicula*.<sup>292</sup> No other information about this individual, besides his status as a freedperson and his female patron, was inscribed.<sup>293</sup> While the text on this *tessera* is not denoting a woman, female owners are named on three others.<sup>294</sup>

Two men named Hilario on Cat. 73 and 74 may be named on two inscriptions, both of which demonstrate libertination. Although the status of either Hilario on the *tesserae* is not conveyed, they were likely slaves given the names in the genitive on the following side. Cat. 74 (26 BCE) names Hilario of the Caecilius family and could be the same freedman (or at the time slave) as the Hilari mentioned on an epitaph naming several freedmen of Demetrius Caecilius.<sup>295</sup> Solin dates this epitaph between the reigns of Augustus and Nero.<sup>296</sup> Cat. 73 (also 26 BCE) names a Hilario owned by a member of the Annii family. He could be the Lucius Annii Hilarus named on an epitaph from Rome which reads *L(ucius) Annii/ L(uci) L(ibertus)/ Hilarus P V(ixit) A(nnos) LX*.<sup>297</sup> Another possibility is an inscription which Solin dates to the period between Sulla and

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<sup>292</sup> Solin (1996), 291; *CIL* VI.28812.

<sup>293</sup> Keppie (1991), 20.

<sup>294</sup> Cat. 102, 107, 128.

<sup>295</sup> *CIL* VI.13722. The entire text reads: *D Caecili D(emetri) L(ibertus) Demetri/ Caeciliae D(emetri) L(iberta) Primae/ [D] Caecili D(emetri) L(ibertus) Hilari*.

<sup>296</sup> Solin (1996), 71.

<sup>297</sup> *CIL* VI 29618.



Caesar, naming a freedman named Marcus Annius Hilarus.<sup>298</sup> Thus, two of three *tesserae* that name Hilarus or Hilario can more likely be identified with freedmen of the families named on the second side of the *tesserae* than to Cicero's or Atticus' families. The only datable *tessera* which mentions the Pomponius family names an individual called Felicio on the first side.<sup>299</sup> An epitaph found in Rome reads simply: *Q(uintus) Pomponius Q(uinti) l(ibertus) Felix*.<sup>300</sup> Perhaps it is a stretch to link the Felicio named on the *tesserae* with the Felix named on the epitaph.<sup>301</sup> Regardless, this *tessera* postdates (Titus Pomponius) Atticus.

So, while a few of the individuals named upon the first side may conceivably be attested on other inscriptions (primarily on epitaphs), there would be limited value to any matches when so little other information can be gleaned from these inscriptions. A few conclusions about those named on the first side can be drawn nonetheless. The evidence on the *tesserae* points overwhelmingly to slaves, not freedmen, as the principal agents of inspection. The identity of those named on Herzog's *tesserae* is thus the reverse of the pattern which emerges on occupational epitaphs and inscriptions from Roman Italy, where "freedmen qualitatively outranked slaves as agents, moneyers and entrepreneurs."<sup>302</sup> Freedmen could serve as legal agents for their former owners, and in court were liable for any suits brought against them, while slaves were a legal liability for their owners.<sup>303</sup> The slaves and freedmen named on Herzog's *tesserae* were no doubt trusted and at least minimally literate. Gostenčnik even imagines that they could also have been

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<sup>298</sup> Solin (1996), 71; CIL I<sup>2</sup> 2527.

<sup>299</sup> Cat. 111 (11 CE).

<sup>300</sup> CIL VI 7926. Solin (1996), 87, dates this epitaph between the reigns of Augustus to Nero.

<sup>301</sup> Felix: Solin (1996), 86; Felicio: Solin (1996), 93.

<sup>302</sup> Verboven (2012), 88. See also Mouritsen (2011), 206, who notes the "sheer abundance of evidence" for freedmen's participation in urban commerce.

<sup>303</sup> Verboven (2012), 99.

engravers of the *tesserae* themselves, but that must remain sheer speculation.<sup>304</sup>

## Section 6.9 Identifications of families named on the Second Side

Those named on the second side of the *tesserae* are evidently from elite Roman families. Claude Nicolet observed that a greater number of the family names which appear on the second side were equestrian during the Republic than in the Principate.<sup>305</sup> In seventy-three examples, dating prior to 44 BCE, there are sixteen names of equestrian origin. Only one name is of equestrian status during the Principate, the Maecenas named on Cat. 112 (13 BCE). The absence of equestrians named during the Principate, coupled with the abundance of senatorial families, led Nicolet to stress that the slaves named on the first side were not just anyone.<sup>306</sup> Ségolène Demougin went a step further by noting the frequency of consuls named on the second side during the Principate.<sup>307</sup> Thus, those named on the second side would reflect the political and economic elites in Roman society. It is no wonder that there would be a connection to financial activities for these families. Because of this association, the *tesserae* have been used as further evidence of moneylending among senators.<sup>308</sup> Herzog, Cary, and Wiseman were eager to identify many moneylenders, bankers, and moneyers among those named on the second side.<sup>309</sup>

Herzog's 1937 *RE* entry provides his identifications of a significant proportion of those families named on the second side with moneylenders, moneyers, and *negotiatores*. His favored

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<sup>304</sup> Gostenčnik (1996), 130-131.

<sup>305</sup> Nicolet (1966), 367-368.

<sup>306</sup> Nicolet (1966), 368. Demougin (1988), 114-115, also remarks on the absence of equestrians during the time of the Julio-Claudians.

<sup>307</sup> (1988), 114.

<sup>308</sup> See Wiseman's comments (1971), 79-80, that by the late Republic some senators had become so wealthy, they had no other economic opportunity left but to loan money.

<sup>309</sup> They connect the *tesserae* with the bank of the Fulvii (both at Rome and on Delos), the Manlii Torquatii who provided loans to provincials, and the moneyers Lollius Palicanus, L. Pomponius Molo and Petillius Capitolinus. Cf. Herzog (1937), 1440-1443; Wiseman (1971), 80-85, 200-201, 253; Cary (1923), 111-113.

association is between the *tesserae* and business activities of *negotiatores* on Delos. Max Cary agreed that there were enough names (thirty-one) in common among the two groups to support this association.<sup>310</sup> The rarity of some of the family names, such as Alfius, was another reason why Cary leaned in favor of this interpretation.<sup>311</sup> Yet thirty-one examples out of one hundred and eighty-four is not a significant percentage of the current corpus (under 17%). The undated example (Cat. 176) naming a L. Pomponius was connected to Lucius Pomponius, a *negotiator* on Delos between 112 and 96 BCE.<sup>312</sup> Those *tesserae* linked with *negotiatores* on Delos by Herzog are sometimes decades apart in date.<sup>313</sup> Similar difficulties in the identification of bankers from Cicero's letters plague Herzog's identifications with businessmen on Delos.

Andreau cautions against many of the identifications that Herzog made relying on brief references in literature and inscriptions, chiefly that Alfius may be confused with the money-lender identified by Horace.<sup>314</sup> He argues that only a few of Herzog's identifications of particular individuals are secure. Notable among those are Eunus Fidiclanius, likely the slave of senator Gaius Fidiclanius Falcula or one of his relatives. Given that this *tessera* (Cat. 28) has the abbreviation *S* and the abbreviated praenomen of the owner (*C.*), this identification is more secure than others. According to Andreau, Athamans Maecenatis (Cat. 112) was probably "the slave of a close relative of Maecenas," and Flaccus Rabiri "may" have been the slave of Gaius Rabirius Postumus, a known money-lender and *publicanus* whom Cicero successfully defended

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<sup>310</sup> Cary (1923), 111-113. Herzog connected names like Fulvi on the *tesserae* with the Fulvius banking firm in Rome, but he especially favored the association with Delos, (1937), 1440.

<sup>311</sup> Cf. Cat. 67.

<sup>312</sup> Herzog (1937), col. 1434; Herzog cites evidence from Hatzfeld (1912) and Grace (1934) to support his argument.

<sup>313</sup> Cf. Servilius Clumes dated to 7 BCE (Cat. 88) and the *negotiator* who was active on Delos between 100-50 BCE, or Vibius (Cat. 138) dated to 61 CE, whose equivalent on Delos was active "after 50 B.C.": Cary (1923), 112.

<sup>314</sup> Horace, *Epod.* 2.67; Andreau (1999), 87.

in court.<sup>315</sup>

Rather than reinvestigating possible identities of the owners on the second side, I instead focus on how common these names were and how ownership was conveyed on the *tesserae*. On three examples from the Principate, the owner is a woman: Tragonia, Rupilia, Attia.<sup>316</sup> There is perhaps one other female name attested, Livia Augusta (Cat. 75), but the reading is dubious.<sup>317</sup> In three instances, a company or an association is named rather than a family name.<sup>318</sup> Andreau maintains that these *socii* were in fact *societates publicanorum*, but the assertion is speculative. Only one of these may denote a particular company, possibly *SOC(II).FER(RARII)*.<sup>319</sup> The second example names a *PRIMUS* who belongs to *SOCIORUM*.<sup>320</sup> The last one, an undated inscription, again names simply *SOCIORUM*.<sup>321</sup>

There are 116 unique family names (*nomina*) listed in the genitive, excluding twenty examples where there is either no name inscribed, or the visible text cannot be reconstructed,<sup>322</sup> as well as the eleven freedmen discussed above. Among those *nomina* that appear legibly on the *tesserae*, eighteen family names appear on more than one *tessera*. The most common family name is Fulvius, attested on five *tesserae*. Table 6.9 below shows family names attested on two or more *tesserae* and the associated name in the nominative. No pairing of the name in the

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<sup>315</sup> See Andreau (1999), 87, for these identifications. Fidicliani: Cat. 28 dated to 62 BCE with the *nomen* [Fidic]lani; Maecenas: *PIR*<sup>2</sup> M 37; Demougin (1988), Appendice IV.77; Gaius Rabirius Postumus: Cicero, *Pro Rab. Post.*, 2.4-3.5. *RE* 6. Broughton (1986), 181. Cat. 27 (62 BCE). Verboven (2008), 214-215, classifies Postumus as a *fenerator* even though this term was used sparingly in Roman literature and epigraphy.

<sup>316</sup> Cat. 102 (6 CE), 107 (8 CE), 128 (33 CE).

<sup>317</sup> Cf. Herzog (1937), no. 78, reads second side as: *L[i]V[iae.Augu]S[ti]*.

<sup>318</sup> Cat. 2, 105, 156.

<sup>319</sup> Cat. 2. This expanded version follows Nicolet (2000), 315, rather than *ILLRP* 1002: *Piloxen(us) soc(iorum) fer(rariarum)*.

<sup>320</sup> Cat. 105. For the frequency of this name, see Solin (1996), 142-144.

<sup>321</sup> Cat. 156.

<sup>322</sup> Cat. 25, 39, 63, 75, 129, 137, 146-147, 161, 164, 167, 171-174, 177, 178, 179, 181-184.

nominative and the name in the genitive reoccurs on the *tesserae*. If these *tesserae* were routinely used by a select group to certify coinage, we could expect to find recurring pairs of names.

Cat. #	Date	Name Second Side	Name First Side	Provenance
73	26 BCE	Anni	Hilario	No record
85	13 BCE		Chilo	Mutina
71	33 BCE	Autroni	Plocamus	Rome
90	4 BCE		Calyx	Ephesus
56	52 BCE	Caccili	Philemo	Rome
74	26 BCE		Hilario	No record
119	24 CE	Canini	Repetinus	No record
134	45 CE		Primigenius	Purchased in Rome
42	57 BCE	Clodi	[Dio]medes	Rome
124	29 CE		Celer	No record
8	76 BCE	Corneli	Dipilus	No record
68	42 BCE		Myro	Purchased in Rome
50	54 BCE	Fabi	Teopropus	Florentia
132	44 CE		Phoebus	No record
28	62 BCE	Fidiclani	Eunus	Rome
31	61 or 53 BCE	[Fidic]lani	[Philar]gurus	Nomentum
33	60 BCE	Fulvi	Philargurus	No record
62	48 BCE		Scurra	Rome
82	17 BCE		Celer	Rome
155	?		Pampilus	Once in Rome
157	?		Pilemo	No record
15	71 BCE	Hostili	Pilotimus	No record
99	5 CE		Cinnamus	Florence ?
126	32 CE		Carus	Purchased in Rome
52	53 BCE	Iuli	Pilodamus	Purchased in Rome
76	25 BCE		Erastus	No record
130	39 CE		Echius	Acquired in Rome
144	83 CE		Arsinas	Acquired in Rome
43	56 BCE	Manli	Faustus	Rome
60	50 BCE		Eros	Rome
72	27 BCE		[M]oschus	No record
14	71 BCE	Novi	Flac[cus]	Capua
175	?		Philon[icus]	No record
168	?	Pecci	Princeps	Magdalensberg
170	?		Laetus	Magdalensberg
46	56 BCE	Petili	Pelops	Tannetum
49	54 BCE	Petilli	Protus	Once in Rome
66	46 BCE	Petilli	Rufio	Once in Rome
109	11 CE	Petilli	Olympus	No record
111	11 CE	Pomponi	Felicio	No record
162	?	Pompon[i]	Liccius	Magdalensberg
165	?	Pompo[ni]	Bono(sus)	Magdalensberg
176	?	Pompo[ni]	Andrea	No record
118	19 CE	Sexti	Fructus	Once in Rome
149	?		Illegible	Acquired in Rome
59	50 BCE	Volcaci	Stabilio	Rome
80	19 BCE		Aqutus	No record

Table 6.9. Most common names on the second side, arranged alphabetically. Dates and provenance are provided where possible.

Clearly these labels are associated with families of the senatorial and equestrian ranks who were involved in moneylending and investment of resources. These classes were the wealthiest in Roman society, and by the very nature of their status they would have been involved in financial enterprises. Equally, their extensive association with business and moneylending casts doubt on hypotheses which limit the use of these *tesserae* exclusively to certify coinage.

### **Section 6.10 Conclusion**

Given the nature of the evidence, the identities of those named on the second side continue to attract much scholarly attention. While I hesitate to identify individuals, I do believe that there are families named on the *tesserae* who were involved in financial enterprises, and that the slave inspectors named were presumably owned by them. However, to me it is rash to associate Herzog's *tesserae* solely with certification of coinage because of the elite families named on the second side and the abbreviation of *SPECTAVIT*.

The texts on the *tesserae* highlight the work of the slaves and freedmen, and their responsibility for inspecting objects. The layout of the text and location of the perforation across the date of manufacture emphasize the names inscribed on the first side. Only the abbreviation for *SPECTAVIT* indicates that an inspection had taken place and that the individual named in the nominative had conducted it. Status is rarely specified. The presence of the owner's family name further identified the slave if issues arose regarding the inspection.

This study of the physical features and texts, while technical, demonstrates that Herzog's *tesserae* were intentionally carved in a prestigious material for a one-time use. These *tesserae* must now be put in conversation with other Roman labels to contextualize their function, distribution, and manufacture. Comparison of labeling practices on other *tesserae* (ones with a similar morphology and with similar texts) may shed light on the use and reception of Herzog's *tesserae*.

## CHAPTER 7: *TESSERAE COMPARANDAE*

### Section 7.1 Introduction

In modern scholarship *tessera* refers to a wide variety of artifacts and has been used as a catch-all term by historians and archaeologists for various small finds with different functions. As previously stated, the literary record remains silent on what Herzog's *tesserae* were called. *Tessera* can be translated as "token, ticket, die, or gaming piece".<sup>323</sup> *Tesserae* are made in various shapes from a variety of materials: glass, bone, ivory, lead, bronze, brass or terracotta. It is unclear what the categories of *tesserae* discussed below were called in antiquity, but scholars have proposed names for each type based on their hypothesis for their function. I will be referring to each type by the name that appears in modern scholarship.

Many *tesserae* are circular, including theater tickets and some gaming pieces, as well as a group of artefacts modern scholars have called *spintriae*. These latter are circular brass or bronze tickets, 20-24 mm in diameter, with erotic images on one side and a number on the reverse, conceivably used for entry to brothels.<sup>324</sup> Some circular lead *tesserae* even resemble coins, often bearing the head of the emperor.<sup>325</sup> It is believed by some scholars that these coin-like *tesserae* were actually used to supplement state issued coinage. A group of terracotta, glass, and bronze *tesserae* were evidently used as tokens for entering a sacred feast at Palmyra.<sup>326</sup> Others, called

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<sup>323</sup> Mattingly and Rathbone, "Tessera" (2012).

<sup>324</sup> Blanchet (1889), 225-242; Graillot (1896), 299-314; Alföldi and Alföldi-Rosenbaum (1976). For a thorough discussion regarding the function of *spintriae*, consult McGinn (2004), 115, and Duggan (2017), 101-121.

<sup>325</sup> Rostovtzeff (1903); Gulbay and Kirec (2008).

<sup>326</sup> See Ingholt (1955).

*tesserae frumentariae*, served as tokens for receiving the grain distribution at Rome.<sup>327</sup> While the latter group are documented in written sources, their form is debated by scholars.<sup>328</sup>

This chapter does not discuss circular *tesserae* or ones made of glass, bronze, brass, or terracotta. Direct parallels cannot be drawn between them and Herzog's *tesserae*, due to differences in physical appearance and labeling practices. More generally, it is difficult to associate *tesserae*, whatever their form, with a specific function due to their absence from the written record.

Here I focus on the *tesserae* that most closely resemble Herzog's: those inscribed, rectangular *tesserae* made from bone or ivory that also have a perforation. I evaluate the content, decoration, production and display of the inscriptions on each. When the similarities and differences between these types are considered, a clear cultural pattern emerges in the manufacture of bone and ivory *tesserae*. This chapter then advances a typology for a standard form, decoration, and display among a select group of *tesserae*. This cultural comparison may then elucidate why Herzog's *tesserae* deviate from this form during the Imperial period.

I also consider a group of lead *tesserae*. While not a direct morphological parallel with Herzog's, the lead *tesserae* are rectangular and also perforated for attachment to an object. They have inscribed texts that can be compared to those of Herzog's *tesserae*. Analysis of this group elucidates why Herzog's *tesserae* were made from ivory or bone, and not from a cheaper and more malleable material like lead.

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<sup>327</sup> Viriouvét (1995).

<sup>328</sup> Mattingly and Rathbone (2012).



## Section 7.2 Problems with Rectangular Ivory and Bone *Tesserae*

Two groups of rectangular *tesserae* resemble Herzog's in form or in content, so-called *tesserae lusoriae* and tribal *tesserae*.<sup>329</sup> These two types are the closest in form to Herzog's *tesserae*, being made of bone or ivory and having similar dimensions. In fact, many museum curators and archaeologists categorize Herzog's *tesserae* as *tesserae lusoriae*, not realizing that Herzog's, while remarkably similar in form, were apparently used for a different purpose. Note, for example, an article about a recent find (a *tessera lusoria*) from Gabii. Here Laura Banducci acknowledges that:

“Ivory and bone tokens of a similar scale, though different function, have been discovered at Roman period sites throughout the Mediterranean and have fascinated archaeologists and antiquarians for centuries. The details of their varying design and inscriptions indicate that bone *tesserae* served many different functions. Yet, a consistent understanding of their typology and their function has eluded scholars. *Tesserae* of different functions are often conflated in museum displays and small-finds reports.”<sup>330</sup>

However, Banducci then falls prey to her own critique. She provides brief overviews of tribal *tesserae* and “*tesserae gladiatoris*,” noting up-to-date scholarship in the former instance. Yet when discussing the latter type, she limits herself to scholarship from the 19<sup>th</sup> century. *Tesserae gladiatoriae* was the term used by Ritschl and Hübner to describe Herzog's *tesserae*; they argued that these *tesserae* were worn by gladiators after they had won a certain number of contests.<sup>331</sup> Banducci's overview is admittedly only the briefest of sketches in an article concentrating on life-histories of *tesserae lusoriae*, but it underscores the issue that she herself

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<sup>329</sup> Cf. Deonna (1938), 335, who assembled bibliography of *tesserae lusoriae*, *tesserae nummulariae*, and *sortes* for divination (which I have not treated in this chapter due to the differences in the nature of inscriptions).

<sup>330</sup> Banducci (2015), 202.

<sup>331</sup> Banducci (2015), 203, cites Ritschl (1878), Hübner (1867), 751-752, Henzen (1871), 151, and the British Museum's Trustees report from 1878. She even asserts that Herzog's *tesserae* “tend not to have a pierced hole, though a few examples do”. She then references a single example from Perugia which “has what seems to be an original ancient hole at its circular end” with no reference to scholarship, except to name the Guardabassi collection.

points out. These types of *tesserae* are often conflated because they have a similar morphology, although in fact they were manufactured and used for different functions. Therefore, this chapter aims to be more comprehensive in its treatment of the *tesserae* that resemble Herzog's.

### Section 7.3 *Tesserae Lusoriae*

Ancient texts do mention gaming pieces referred to as *tesserae*, but do not describe their appearance.<sup>332</sup> The modern category *tesserae lusoriae* refers to rectangular ones of bone or ivory that are also perforated through a circular head, typically from the second through to the fourth side (Fig. 7.1).<sup>333</sup> The form is similar to Herzog's Republican Types 1 and 2. They are typically inscribed on two sides with all capital letters in the Republican script. On the first side is a word, usually an adjective, in the nominative or vocative. A number is inscribed on the third side. On some examples, the third side also has the letter A, or A and lambda, inscribed following the number. The second and fourth sides are intentionally left blank. The total of known examples is not clear: Banducci reported that there were at least 112 in 2015, Marc Guàrdia i Llorens counted 147 in 2017, while F. German Rodriguez Martín, noted that there are at least 165 in 2016.<sup>334</sup>



Fig. 7.1. *Tessera lusoria* from the Museo Archeologico Nazionale Romano di Napoli (inv. 77094). It is 61 mm long, 10 mm wide, 5 mm tall.

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<sup>332</sup> For gaming *tesserae*, see Ovid, *Tristia* 2.475 and *Ars Amatoria* 3.354. For descriptions of games of chance, see Livy, 4.17; Suetonius, *Divus Augustus* 69; Suetonius, *Claudius* 33; Ovid, *Ars Amatoria* 2.208.

<sup>333</sup> *ILS* 8625; *CIL* XI 6728.

<sup>334</sup> Banducci (2015), 203; Martín (2016), 216; Llorens (2017), 181-184.

The function of these *tesserae*, like Herzog's, used to be generally agreed upon by scholars. They were identified as pieces for Roman board games, although nothing inscribed upon them can be directly linked to a specific board game. In a report about the sixteen *tesserae lusoriae* found in Perugia in 1887, Gian Francesco Gamurrini was the first to propose that these objects were used as gaming pieces.<sup>335</sup> To him, the texts inscribed on them were evocative of play. Positive attributes (*rex, felix*) were inscribed in the nominative and corresponded to higher numbers on the third side, while negative attributes (*gulo-* glutton, *moiche-* aldrer, *vapio-* vapid person) were in the vocative case and associated with lower numbers.<sup>336</sup> He proposed that they were used to play a game similar to *duodecim scripta*, which Cicero and Quintilian discussed, but its rules remain unclear.<sup>337</sup> It was played with fifteen pieces. Notably, the numbers inscribed on extant *tesserae lusoriae* exceed the number fifteen.<sup>338</sup>

However, when Christian Huelsen produced the first comprehensive study of *tesserae lusoriae* in 1896, he asserted that they were used for the game of *ludus latrunculi*.<sup>339</sup> Yet this identification is problematic, most notably because in the scarce textual references the anonymous author of *Laus Pisonis* mentions that the game used black and white pieces, while Ovid mentions that it could be played with colored glass pieces.<sup>340</sup> Despite the references to gaming pieces apparently different from the rectangular bone *tesserae* found in excavations,

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<sup>335</sup> See Brizio and Gamurrini (1887), 391-398.

<sup>336</sup> See Martín (2016), 212-218, for his tables and discussion of the 53 different terms that appear on *tesserae lusoriae*, their frequency, and the numbers associated with these terms.

<sup>337</sup> Cicero, *de Oratore* 1.217; Quintilian, *Institutio Oratoria* 11.238.

<sup>338</sup> Austin (1934), 26-27, fig. 2; Banducci (2015), 208.

<sup>339</sup> Huelsen (1896), 227-237. Deonna (1938), 335.

<sup>340</sup> *Laus Pisonis*, 190-194; *Ars Amatoria* 2.208; *Trista* 2.477.

some scholars have accepted Huelsen's identification.<sup>341</sup> Some, in turn, have disagreed with the identification of the game as *ludus latrunculi*. In the second of two articles about Roman board games, in 1935, Roland Austin noted that "all playing-pieces discovered" were circular and made of either glass, bone, or ivory.<sup>342</sup> He therefore did not consider rectangular bone or ivory *tesserae* as gaming pieces at all.<sup>343</sup> Since 1995, this subset of rectangular *tesserae* with a circular head at one end has been identified as gaming pieces under the broader term of *alea* games.<sup>344</sup> These are games of chance which involve casting a die and moving pieces across a board. They include *ludus latrunculi*, *duodecim scripta* and *reges*.

The examples that have an A or A and lambda following the number on their third side also call for explanation (Fig. 7.2, fourth example on the right side). The most common supposition is that this addition denotes special pieces. Nicoletta Cecchini argues that those marked with an A distinguish the main series from a secondary one.<sup>345</sup> Martín does not rule out Cecchini's proposal but suggests that instead of there being two different series, the A or A lambda should be seen as a modifier. The additional letter or letters would set that piece apart, either giving additional points, or alternatively, reducing the value of the number.<sup>346</sup> The exact nature of the additional letters will remain debated, and likely hinges on identification of the specific game in which these pieces are thought to be used.

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<sup>341</sup> Crawford (2002), 1126-1128.

<sup>342</sup> Austin (1935), 80.

<sup>343</sup> Oddly, in his discussion of publications regarding Roman board games, he makes no mention of Huelsen's work, while commenting on a substantial number of articles and encyclopedia entries, including an article from an earlier volume of *MDAIR* where Huelsen published his study.

<sup>344</sup> Purcell (1995), 9, a convincing identification.

<sup>345</sup> Cecchini (2015), 67-68.

<sup>346</sup> Martín (2016), 218.



Fig. 7.2. *Tesserae lusoriae* from Perugia, currently in Museo Archeologico Nazionale dell’Umbria. Left: First sides. Right: Third sides. From Banducci, (2015), 205 and 206.

While the exact game for which these *tesserae lusoriae* were used is unknown, Banducci maintains that this issue is of no consequence. Agreeing with Austin that the rules of board games evolved over time, she believes that development would explain inconsistencies in the ancient literature.<sup>347</sup> Lorenzo Campagna has proposed that these *tesserae* could have been used

<sup>347</sup> See Banducci (2015), 209, and Austin (1934), 25-30.

to play a variety of games.<sup>348</sup> If they were so used, they likely represent an individual's personal set brought to the forum or another place where communal games were played. While some individuals could have also afforded their own gameboards made of wood or ivory, this option was reserved to an elite group.<sup>349</sup> Most individuals are thought to have played games on boards carved in public spaces. A study of game boards from the Roman forum found 77 such boards carved into stone surfaces.<sup>350</sup> Individuals would likely need different quantities (and types) of counters to play different games. At least it would seem that *tesserae lusoriae* were manufactured and carried as a set, tied together with a string threaded through a hole.<sup>351</sup>

Within the last decade, however, some scholars have abandoned the identification of these *tesserae* as gaming pieces and have proposed other functions instead. Massimo Casagrande believes that the sixteen tokens recovered from a tomb in Perugia were *sortes*, or lots, used for fortune-telling, and that the deceased was a magician, an identification seen as weak by Banducci.<sup>352</sup> She nevertheless acknowledges the merit of the association between lots and gaming tokens: "Flipping a coin, drawing straws or indeed rolling the die of board games in order to decide which player will go first are all examples of small objects employed as fortune-tellers."<sup>353</sup> In a footnote she remarks on the multiplicity of uses of *sortes*, which in the Etruscan period in central Italy could be used in cleromancy practices or repurposed as votive offerings.<sup>354</sup> Her remarks about them could also be applied to *tesserae*: "The heterogeneity of the form of

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<sup>348</sup> Campagna (1995), 285.

<sup>349</sup> See Petronius, *Satyricon* 33, and Martial 12.1.8, 14.17; Crummy (2007), 352-356.

<sup>350</sup> Trifilo (2012).

<sup>351</sup> Banducci (2015), 204 and 214.

<sup>352</sup> Casagrande (2012); Banducci (2015), 210.

<sup>353</sup> Banducci (2015), 210.

<sup>354</sup> Banducci (2015), 210; Gianni (2001); Maras (2009), 37-40.

these so-called *sortes* is indicative of the flexibility of the function of minor objects as well as reflecting the difficulty in scholars' identification of them."<sup>355</sup>

Standardization in form – where objects with different functions mimic one aesthetic type – creates an abundance of problems for scholars. Giulia Baratta, in turn, has proposed that these *tesserae* could have been used as tickets to enter spectacles and games. However, she does not provide any evidence for her hypothesis, merely referring to an unpublished manuscript.<sup>356</sup> Other *tesserae* that have been considered tickets for entry into theatrical performances are usually circular rather than rectangular and seldom perforated. Conceivably, certain performances would necessitate a different form of *tessera* from the typical rounded form. Until Baratta's manuscript is published, a sufficient explanation for her hypothesis is elusive.

While the exact function of *tesserae lusoriae* remains debated, their use as gaming pieces remains the most plausible explanation for their form, perforation, decoration, material and text. The use of bone as the material of choice would suit the creation of a personal game-piece set for a less wealthy individual to carry down to a forum and to use on the public game boards there.

According to Banducci, *tesserae lusoriae* have a primarily Italian provenance, like Herzog's *tesserae*. She makes this claim without providing an exact count. She also notes vaguely that some have been found on Delos (Fig. 7.3).<sup>357</sup> Only in 2017 did Llorens provide a description and table of the distribution pattern, with references to the relevant scholarship about

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<sup>355</sup> See Banducci (2015), 210 and footnote 34.

<sup>356</sup> Baratta (2014), 69.

<sup>357</sup> Banducci (2015), 203 n. 14, mentions the examples from Delos without reference to specific excavations. Deonna (1938), 335-336, published eight pieces.



each example.<sup>358</sup> According to his reconstruction of the distribution, 124 of the 147 *tesserae lusoriae* were found in Italy, thirteen in Spain, eight on Delos, and two in Gaul (Map 7.1).<sup>359</sup>

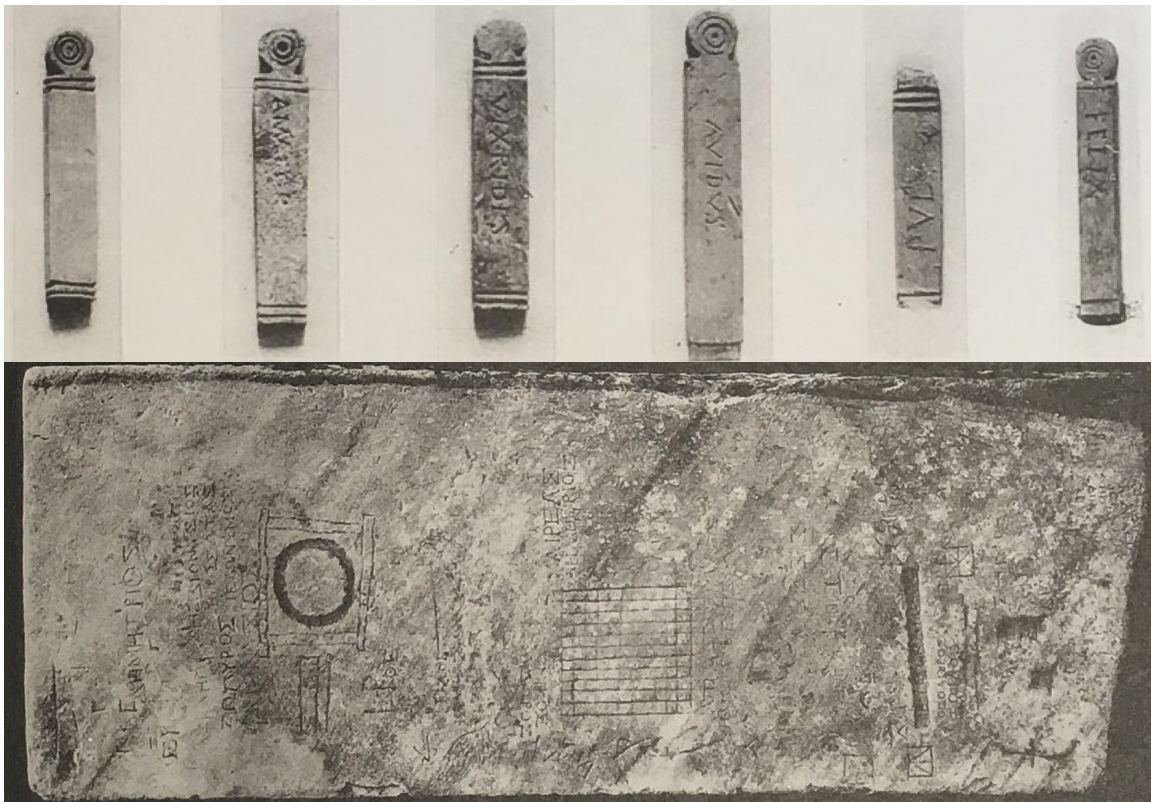


Fig. 7.3. Top: Six of eight bone *tesserae lusoriae* found on Delos. From Deonna (1938), Pl. XCIV, fig. 826.1-6. Bottom: Game board found during excavations on Delos. From Deonna (1938), Pl. XCIV, fig. 827.

Llorens' research supports the notion of an Italian distribution. Martín agrees, even though he points to a larger number of examples from Spain (twenty-one). He even claims that a great percentage was found in Campania near Neapolis,<sup>360</sup> probably because Neapolis, as a commercial center, would have been the port for trade of these objects to Spain and other areas of the Mediterranean. However, Llorens counters that only six examples were found in Naples, while eleven were found at Pompeii and two were excavated at Cumae.

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<sup>358</sup> Llorens (2017), 180-186.

<sup>359</sup> For recent finds of *tesserae lusoriae* in Spain, see: Llorens (2017), 178-180; Martín (2016), 207-220; Illana (1987), 331-336; Baratta (2014), 69-74. For recent *tesserae lusoriae* from Gaul, see Baratta (2015), 195-200.

<sup>360</sup> Martín (2016), 209.





Those *tesserae lusoriae* recovered from a controlled context are dated to the second and first centuries BCE; many are from tombs dating to the second century BCE.<sup>363</sup> Seventeen were found at Basta (modern Vaste, Puglia) in a cistern at the top of a back-fill, dating to the second half of the second century BCE.<sup>364</sup> One of the most recent Spanish finds, from Eivissa (modern Ibiza), also comes from a funerary context of this period.<sup>365</sup> The date range of those from secure archaeological contexts has led Baratta to claim that this type of rectangular *tessera* was no longer in vogue by the Imperial period.<sup>366</sup> However, the recently excavated *tessera lusoria* from Gabii was found in a context from the earliest phase of the necropolis there, which is dated to the late 1<sup>st</sup> century CE.<sup>367</sup> The excavators believe that it was either intentionally placed with the deceased, or abandoned in another portion of the site and deposited later.<sup>368</sup> At any rate, it seems clear that *tesserae lusoriae* were in use prior to the earliest dated examples of Herzog's *tesserae*. Conceivably, then, the form of Herzog's Republican *tesserae* was borrowed from an existing type. Later, the beginning of the Imperial period appears to mark the end of production of *tesserae lusoriae* and, as it happens, the emergence of a new form of Herzog's *tesserae*.

*Tesserae lusoriae* are similar in shape and material to Herzog's. There seems to be a preference for bone to produce *tesserae lusoriae*, and many are not polished. In Spain at least, the notion of this preference is reinforced by the fact that ivory ones are rare finds there (Fig. 7.4).<sup>369</sup> While the form is similar to Herzog's, the dimensions are slightly different. From the

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<sup>363</sup> Bendinelli (1921), 229; Casagrande (2012), 248; Banducci (2015), 204.

<sup>364</sup> See Campagna (1995), 263.

<sup>365</sup> Baratta, (2014), 71.

<sup>366</sup> *Ibid.* 70.

<sup>367</sup> Banducci (2015), 201.

<sup>368</sup> *Ibid.* 211.

<sup>369</sup> Baratta (2014), 69.

examples I have been able to study in Britain, France, and Italy, the lengths of *tesserae lusoriae* are comparable, measuring between 50 to 65 mm. However, scholars who have studied a greater number note a much more extended range, from 50 to 100 mm.<sup>370</sup> *Tesserae lusoriae* are typically thinner than Herzog's, perhaps because they are only inscribed on the first and third sides; they average 4 to 7 mm, while Republican examples of Herzog's average 6 to 8 mm. The difference is only a few mm, but worth noting because it indicates that, while the form of these *tesserae* is similar, their functions and the need to inscribe on a different number of sides called for different dimensions.

*Tesserae lusoriae* have more decoration than Herzog's. Almost every example with the head still attached that I have seen has a circular head with incised decoration, usually in the form of concentric circles (Figs. 7.1 and 7.3).<sup>371</sup> At least eight Spanish examples have concentric circle designs on their heads (Fig 7.4). There are also incised lines at the top and bottom of the body, similar to those which often appear as borders on Herzog's *tesserae*. Typically, there are more incised lines on the *tesserae lusoriae* than on Herzog's, numbering two or three at either end of the body rather than the one at each end of Herzog's. Despite the wide distribution pattern of *tesserae lusoriae*, the decoration is consistent:

“The bone processing workshops testify the production of these gaming pieces, among other necessary items of daily use. Differences between the final products of different workshops are small, the majority of them having similar decoration despite slight variations found even in the case of products manufactured in the same region. A comparative study regarding--among other objects--the Roman gaming pieces, made on samples found at Virunum, Augusta Raurica, and Magdalensberg showed small differences in ornamentation and form between the examined samples.”<sup>372</sup>

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<sup>370</sup> *Ibid.*

<sup>371</sup> Only one *tessera lusoria* from Delos does not have incised concentric circles on its head (Fig. 7.3, third example).

<sup>372</sup> Boțan and Nuțu (2009), 149.



Fig. 7.4. First and third sides of *tesserae lusoriae* from Spain. From Martín (2016), 210.

The difference in function between Herzog's *tesserae* and *tesserae lusoriae* may allow for more creative liberties in the production of the latter, but still there is a remarkable similarity of decoration among these examples manufactured in multiple production centers. *Tesserae lusoriae*, like Herzog's, reflect standardization in form, size, and decoration among sets and across the entire corpus,<sup>373</sup> while the general form of rectangular *tesserae* with circular heads appears to be used heavily for a multiplicity of purposes.

<sup>373</sup> Banducci (2015), 204, argues that they were produced as sets, judging by the finds from Vaste and Puglia.

## Section 7.4 Tribal *Tesserae*

Another direct physical comparison can be made between the *tesserae* termed “tribal” by Michael Crawford and Herzog’s Republican examples (Fig. 7.5). The former were once considered *tesserae lusoriae*.<sup>374</sup> Crawford’s identification is recent (2002), but has been accepted.<sup>375</sup> There are only seven examples (Table 7.1), each for a different tribe, but still there are none for the remaining twenty-eight of the thirty-five voting tribes in the late Republic. Given that these *tesserae* have a drilled hole, Crawford has posited that they did not served as lots; rather, they were attached to the vessels holding each tribe’s votes.<sup>376</sup> He dismisses the idea that they were attached to bags of money to bribe the tribes before the vote, saying this seems a wild idea (“*semble extravagante*”).<sup>377</sup>

Tribal <i>Tessera</i> #	First Side	Third Side	Figure 7.6	Location
1	ESQ	III	No photographs known	Paris, Collection Seymour de Ricci
2	ROM	V	a	BM (1971,0813.1)
3	OVF	XVI	b	BM (1772,0311.9)
4	PVB	XX	c	BNF (Froehner 78)
5	CLU	XXIIX	No photographs known	Collection Pollak
6	QUI	XXIX	d	BNF (Froehner 62)
7	VEL	XXX	e	Milan (Sambon 515)

Table 7.1. Table of surviving tribal *tesserae* as identified by Crawford (2002), 1134-1135.

<sup>374</sup> Huelsen (1896), 230. Sambon (1911), 37.

<sup>375</sup> Banducci (2015), 203, gives support for it.

<sup>376</sup> Crawford (2002), 1132.

<sup>377</sup> *Ibid.*, 1132.



Fig. 7.5. Four *tesserae* from the British Museum. At top is a tribal *tessera* (BM 1971,0813.1). The bottom three are the first sides Republican examples of Herzog's *tesserae* from the 70s BCE (Cat. 12, 10, 18). Top: *ROM*, 2nd: *TEVPILVS*, 3rd: *DIOCLES*, Bottom: *HERACLEO*.

Tribal *tesserae* are inscribed only on their first and third sides. On the first side, each has a three-letter abbreviation for a Roman tribe, such as the top example in Fig. 7.5 with the abbreviation *ROM* for the tribe Romilia. This abbreviation is inscribed in all capitals of uniform thickness, with unadorned letter-forms that resemble those of the late Republic.<sup>378</sup> On the third side these *tesserae* bear a number that corresponds to the order of the tribes. For example, those at the British Museum have the Roman numeral *V* on the third side of the *tessera* for Romilia and *XVI* on the *tessera* for Oufentina (Fig. 7.6a-b).

In the census, Romilia was the first rural tribe after the four urban tribes, an order confirmed by Varro and an Imperial inscription.<sup>379</sup> Crawford concluded that not only did these *tesserae* reflect the order of the urban and rural Roman tribes, but they also confirmed Lily Ross Taylor's hypothesis that this order was according to their positions along major public roads

<sup>378</sup> See Salomies (2014), 169-170, for a description of unique letter forms. The tail of the Q on n. 6 (fig. 7.6d) is straight and extends nearly to the next letter.

<sup>379</sup> See Taylor (1960), 69-78, for discussion of the epigraphic and literary evidence. Cf. Varro, *L. L.* 5.56 who, after naming the four urban tribes, writes "*quinta, quod sub Roma, Romilia*"; *CIL* VI. 10211; Cicero, *de Lege Agraria* 2.29.

leaving Rome in a counter-clockwise direction, beginning from Romilia on the road to Ostia and ending with Arnensis on the southern coast of Etruria.<sup>380</sup>

None of the examples has a known provenience.<sup>381</sup> Since Crawford's distinction of these *tesserae* from *tesserae lusoriae* is relatively recent, perhaps more will be identified. Given the interest in collecting *tesserae* during the 18th and 19th centuries, it is also likely that more are in private collections.

At least five of the seven tribal *tesserae* are rectangular, with a circular head at one end and a hole drilled through the head (Fig. 7.6). However, the tribal *tesserae* are much thinner than Herzog's, presumably because they are inscribed only on two sides, like the *tesserae lusoriae* discussed above. They are between 4-6 mm thick,<sup>382</sup> which is less than the Republican examples of Herzog's that average 6.8 mm; but their length and width are comparable.

Due to the paucity of extant examples, it is difficult to generalize about physical appearance and decoration. I have studied only four examples in person, have examined a photograph of the fifth (Fig. 7.6e), and have not found photographs or drawings of the remaining two examples (Table 7.1 nos. 1 and 5). Tribal *tesserae* have holes drilled from the second through fourth sides, similar to Herzog's *tesserae*. On the four examples that I have seen (Fig. 7.6a-d), there is not a consistent pattern of decoration; even so, this type of *tessera* has more decoration than does Herzog's, particularly on the heads. The Romilia *tessera* (Fig. 7.6a) lacks decoration beyond incised lines at the top and bottom of the body to frame the inscribed texts. The Poblilia, Quirina, and Velina *tesserae* (Fig. 7.6c-e) have incised concentric circles around a

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<sup>380</sup> Crawford (2002), 1130.

<sup>381</sup> Crawford (2002), 1135.

<sup>382</sup> Both examples from the British Museum are 5 mm thick. Cecchini (2015), 68, reports that the Velina *tessera* is 5 mm thick.



central dot on the circular head. In addition, two have single incised lines and two have double incised lines at the top and bottom of the body on the first and third sides.<sup>383</sup> The Oufentina *tessera* (Fig. 7.6b) has damage to its top, and there now is no head; but still, it has more decoration than all the other examples, with not one, but two, incised lines at the bottom of the body. At the top of the body, it has four incised lines, with the middle two crisscrossing. In terms of display, the tribal *tesserae* attempt to center the text on both inscribed sides.



Fig 7.6a-e. First and third sides of five of seven tribal *tesserae*. a) Tribal *tessera* from the British Museum (BM 1971,0813.1). Left: *ROM* (for Romilia). Right: *V*. b) Tribal *tessera* made from ivory in the British Museum (BM 1772,0311.9). Left: *OVF* (for Oufentina). Right: *XVI*. c) Froehner 78 currently located in the Bibliothèque nationale de France. Photographs provided for study purposes by Mathilda Avisseau. Left: *PVB* (for Poblilia). Right: *XX*. d) Froehner 62 housed in the Bibliothèque nationale de France. Photograph provided for study purposes by Mathilda Avisseau. Left: *QVI* (for Quirina). Right: *XXIX*. e) Tribal *tessera* in Milan. Left: *VEL* (for Velina). Right: *XXX*. From Cecchini (2015), Tav. 6, fig. 5a-b.

<sup>383</sup> Single incised lines: fig. 7.6a and d. Double incised lines: fig. 7.6c and e.



Unlike Herzog's, tribal *tesserae* do not bear a date, but given their proposed function, it is likely that they are Republican. From the similarities of form, size, and material it would seem that tribal *tesserae*, *tesserae lusoriae*, and the Republican examples of Herzog's were all produced during the same period. Nonetheless, an exact date range is impossible to reconstruct.

### Section 7.5 Lead *Tesserae*

A group of rectangular *tesserae* offering an invaluable comparison to Herzog's are lead ones used in a variety of commercial activities. Modern scholars have called them *lamellae perforatae*, *tabella plumbaea*, *étiquettes en plomb*, *Bleietiketten*, *etichette plumbee iscritte*, *lead labels* or *lead tags*.<sup>384</sup> These lead *tesserae* are approximately the same size as Herzog's, measuring 30-40 mm long and 15-25 mm wide. They are quite different in shape than Herzog's. While both types are rectangular, lead *tesserae* are nearly as wide as they are long, but just a few mm thick, so only intended to be labelled on one or two sides (Fig. 7.7). Like Herzog's, they are perforated at least once, but typically in the corner of the label, so that they could be attached to their object. Some inscribed on both sides invert the inscription on the reverse.<sup>385</sup> Although not a direct physical parallel, the inscribed texts have strikingly similar content to the inscriptions on Herzog's *tesserae*.

This content is varied, but typically includes: the name of the product (usually abbreviated), quantity or weight, a price, and even a task to be executed.<sup>386</sup> Names of individuals

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<sup>384</sup> Published as *lamellae perforatae* or *tabella plumbaea* in *CIL* III 11883, *CIL* XI 6722, 1-12, *CIL* XIII 10029, 325. Examples from Britain are published under the term "Labels": *RIB* II 2410.1-23. Egger's (1961-3), 185-201, study of the lead labels from Raetia paved the way for further studies on lead *tesserae*. Notable studies include the lead tags from Burrio (modern Usk, Britain): Wilson et al. (1975), 291-293, and those from Iulia Concordia in Italy: Solin (1977), 145-164. For a thorough review of the scholarship and status of current research, see Radman-Livaja (2010) and (2013a), 87-91.

<sup>385</sup> On the examples from Usk, writing was inverted so that the hole remained on the left side of the text. See Wilson et al. (1975), 291, and *RIB* II 2410.13-22.

<sup>386</sup> Radman-Livaja (2013a), 90.

appear on some. When these *tesserae* are inscribed on both sides, the first side normally names an individual or merchandise, the second provides details about the merchandise such as quantity, weight, or value. These *tesserae* were also reused, bearing marks layered overtop of the original inscriptions, making it difficult to distinguish earlier inscriptions from later ones.<sup>387</sup>



Fig 7.7. Lead *tesserae* from Siscia. Photograph from Radman-Livaja (2013a), 88.

The text was incised using capital letters or cursive, or sometimes a combination of both.<sup>388</sup> For capital letters, the inscription is clumsier and less precise than any of the types made

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<sup>387</sup> Radman-Livaja (2013a), 88.

<sup>388</sup> Radman-Livaja (2010), 53-68, provides a thorough overview of the paleography of the letters inscribed on lead tags from Siscia.

of bone or ivory (Fig. 7.8). At times, the script resembles graffiti rather than monumental capitals.<sup>389</sup> No dates are inscribed. The lead *tesserae* from Siscia, which probably relate to the textile industry, appear from the letter forms to date from the 1<sup>st</sup> century CE to possibly the early 3<sup>rd</sup>.<sup>390</sup> Their form, material, inscriptions, and pattern of reuse prompt consideration of why Herzog's *tesserae* have the form and inscriptions that they do.

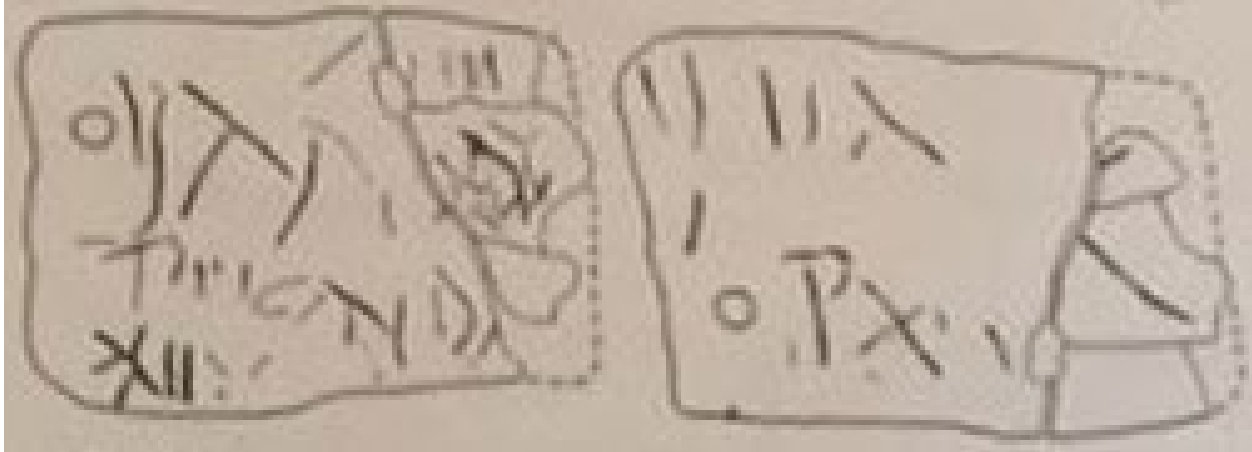


Fig. 7.8. Drawing of lead *tessera* from Burrio (modern Usk, Britain). 40 by 30 mm. Obverse: [...]*sar[ci]na/ iii pond(o) [xii] / X iix*. Reverse: [*X*] *iix p(ondo) xii*. Transl. ‘Package 3, twelve (pounds) in weight, (value) eight denarii.’ From *RIB* 2410.14.

Such lead *tesserae* have been recovered across Italy and from many of the European Roman provinces, from Britain in the West to Illyricum and Pannonia in central Europe (Map 7.2). The largest assemblage is the Siscia group, which totals around 1,200. The exact number of lead *tesserae* is unknown, but they are more common than any type of bone or ivory *tesserae*. Their distribution will likely shift in the future, as new finds have been published regularly since the 1980s.<sup>391</sup> Ivan-Radman Livaja has argued that their apparent absence in the East and in Africa need not rule out lack of use in these areas.<sup>392</sup> Their geographic distribution could also be

<sup>389</sup> Radman-Livaja (2010), 53, argues that the capital letters are reminiscent of monumental capitals.

<sup>390</sup> Radman-Livaja (2013a), 101.

<sup>391</sup> *Ibid.*, 89.

<sup>392</sup> *Ibid.*, 88.

explained by the accessibility of lead across the Mediterranean.



Map 7.2 Lead *tesserae* Provenience.

As with Herzog's *tesserae*, interpretation of the inscriptions poses challenges. Individuals named on these lead *tesserae* appear in the nominative, the genitive, and sometimes the dative. Scholars believe they could be clients, manufacturers, owners, or slave workers.<sup>393</sup> Rudolf Egger, in his study of examples from Raetia, favored the view that these *tesserae* record the names of manufacturers of textile work commissioned by soldiers, or of tailors who mended clothing.<sup>394</sup> However, Radman-Livaja cautions that there is nothing on the *tesserae* to suggest

<sup>393</sup> See Radman-Livaja (2013b), 165-180.

<sup>394</sup> Egger (1961-3), 186-196.

work commissioned solely by the army. Moreover, Egger's vision of the relationship between tailors (*excisor, sutor*), fullers, and soldiers is never adequately linked in his explanation.<sup>395</sup> Geza Alföldy argued that those mentioned in the nominative were the manufacturers of the textiles, while the names in the genitive were owners of the merchandise, and the sparing references to individuals in the dative refer to clients to whom the product was delivered.<sup>396</sup> However, Alföldy does not elaborate on why these names were inscribed. As Radman-Livaja points out, this is no surprise given “the lack of information in ancient sources and the scarcity of analogies.”<sup>397</sup>

Lead *tesserae* were used in a variety of trades. From the inscriptions naming merchandise, many of the lead *tesserae* found in the provinces can be linked to, for example, food supply,<sup>398</sup> oils and perfumes,<sup>399</sup> kitchenware,<sup>400</sup> and textiles. *Tesserae* found in Strbinci (possibly ancient Certissia), Croatia and the Roman provinces of Noricum (including Magdalensberg) and Raetia may be linked to the textile industry (Fig. 7.9). For example, Radman-Livaja reads the inscription on one of the two lead *tesserae* from Strbinci as *si(lacea) cas(ula) / sulfur(e suffire) / (denarios) duos dupondium*. Thus, he understands that the text refers to a Gaulish cloak (*casula*) which was draped over a pot of burning sulfur (*sulfur(e suffire)*) in a *fullo* to reduce the brightness of the color (*si(lacea)*). This service would cost two denarii and one dupondius.<sup>401</sup>

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<sup>395</sup> Radman-Livaja (2013a), 91-92.

<sup>396</sup> Alföldy (1993), 16.

<sup>397</sup> Radman-Livaja (2013a), 93.

<sup>398</sup> Krier (1991), 11, Feugère, (1993), 301-302, Schwinden (1994), 25-32, Scholz (2005), 246, Reuter and Scholz (2004), 60.

<sup>399</sup> Solin (1977), 155-159, Marengo (1989), 41-43, and Paci (1995), 33-36.

<sup>400</sup> Weber (1981), 29-31.

<sup>401</sup> Radman-Livaja (2013a), 167-168.



Fig. 7.9. Lead *tessera* from Strbinci. Reproduced from Radman-Livaja (2013b), 167.

It is also common for these *tesserae* to bear inscriptions that specify prices and weight, but not the specific merchandise or economic enterprise.<sup>402</sup> While many tags can be identified for use in specific industries, it is also possible they were used to label personal property; their design allows for this.<sup>403</sup> At least three tags from Siscia have the inscription *tesseram perdidit(t)* and thus served as a provisional label when the original was misplaced.<sup>404</sup> The wide variety of potential uses and the relatively brief inscriptions complicate our attempts to identify the specific function of many lead labels.

In 1989 Giacomo Manganaro proposed a novel function for two lead *tesserae* found in Sicily. Since their inscriptions record sums of money, he postulated that they could have been attached to bags of coins.<sup>405</sup> Yet, as Radman-Livaia notes, the inscriptions just reflect the price

<sup>402</sup> See Radman Livaja's (2013a), 91, summary, as well as Bassi (1996), 207-216, and Römer-Martijnse (1997).

<sup>403</sup> Radman-Livaia (2013a), 90-91.

<sup>404</sup> *Ibid.*, 99.

<sup>405</sup> Manganaro (1989), 193-194.



of an unspecified object. In fact, lead *tesserae* that have inscribed prices or numbers without naming a merchandise or activity are fairly common. The two from Sicily name individuals and include the abbreviation *N* that Manganaro has argued signifies *nummi* since it is followed by a small number.<sup>406</sup> Manganaro then argues that the denomination is in *denarii* rather than *sestertii*.<sup>407</sup> The *tesserae* were reportedly recovered with Republican *denarii*. It is unclear if both were found with sums of money, and if they were intentionally deposited with them.

However, without proper documentation of the recovery, Manganaro's interpretation of the function is dubious. He suggests that the names in the genitive could be read as "deposited by Iunius Oscus", but this is not a plausible use of the genitive. More likely the genitive conveys ownership, that the object being purchased (or mended) belonged to Oscus for the price of six *nummi* and an additional sixteen *nummi*. The lettering style led Manganaro to date the two *tesserae* to the second or first century BCE, and especially the period of 44 BCE-36 BCE.<sup>408</sup> Such precise dating seems out of reach. At least, if Manganaro's proposal and dating are correct, and Herzog's *tesserae* were exclusively used to certify bags of coinage, lead too could have been used to label bags of money.

The lead *tesserae* are striking for the abundance of detail that they provide about economic activity. They suggest a question: if Herzog's *tesserae* were for the certification of coinage and used by financial officials, why do they not state the amount or quality of the coinage? Unless there was a standard amount or a set quality of coinage, one would expect more thorough documentation. Rather, Herzog's *tesserae* must have been used for a purpose which did

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<sup>406</sup> The first states *VI* on the first side and *XVI* on the reverse, while the second states *NI* and *S*.

<sup>407</sup> Manganaro (1989), 194.

<sup>408</sup> *Ibid.*, 195.

not necessitate further explanation on the labels themselves. Like the lead *tesserae*, Herzog's could be used for various labeling purposes. The lead *tesserae* have a standard shape, and while it seems that inscriptions on them were brief and more subject to variation than those on Herzog's *tesserae*, they are nevertheless formulaic. A standard form could be adopted for different functions, so Herzog's *tesserae* could surely be used for labeling different objects, perhaps including bags of coins.

While the content of inscriptions on lead *tesserae* and Herzog's are similar, clear distinctions between them can be drawn. Lead was a material suitable for inscribed labels and seals, given its durability, malleability, and low cost relative to other materials.<sup>409</sup> Lead *tesserae* were utilitarian labels, however, while Herzog's were surely intended to be displayed. Unlike lead *tesserae*, Herzog's do not bear signs of reuse. Thus, it seems that his were intended to remain with their object, whereas lead *tesserae* were evidently reused in workshops or economic centers and remained with their object only until a transaction was completed. Lead *tesserae* do not have any decoration. Moreover, some inscriptions on them are quite clumsy, as if the inscriber only wrote with difficulty.<sup>410</sup> Even so, because lead *tesserae* were produced for short-term use, inscriptions did not have to be as precise as those on Herzog's *tesserae*. Ivory and bone were the choices for the latter because these substances were more prestigious materials than lead.

## **Section 7.6 Conclusion**

This chapter has sought to fill a lacuna in the scholarship. The relative lack of literature on the three types of rectangular *tesserae* discussed here, let alone thorough comparisons of

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<sup>409</sup> Boulakia (1972), 143-144.

<sup>410</sup> Radman-Livaja (2010), 53.



them, has led to misidentification and incorrect assumptions. Beyond a similar morphology, what is missing for each of these types of *tesserae* are specific descriptions in the ancient literature and specific provenience, except for recent archaeological finds from controlled excavations. Hence a comprehensive study of rectangular *tesserae* is sorely needed.

To explore the function and reception of Herzog's *tesserae*, attention must next turn to labeling and sealing practices within the Roman world. I move now to compare labels on other materials, and to ask whether perforated labels mention the goods or objects they were attached to. I also consider extant texts and images relevant to how labels were used in the Roman world, particularly in economic transactions. A brief survey of Roman sealing devices used on commercial goods is also necessary to understand the purpose of Herzog's *tesserae*.

## CHAPTER 8: THE PURPOSE OF HERZOG'S ROMAN *TESSERAE* RECONSIDERED

### 8.1 Introduction

This chapter reconsiders the evidence for Herzog's hypothesis that the *tesserae* certified the content of bags of money. As discussed in Chapter 2, there are several facets of the *tesserae* which make this hypothesis unsatisfactory. Herzog and other scholars have isolated the inscriptions and dates to explain their function. Their attempts to reconcile geographic distribution, inscribed days of inspection, years of manufacture, and prosopography of those named on the second side have presented challenges. On the assumption that the *tesserae* were used for one type of object exclusively, scholars have tried to find the most likely category of object labelled. Prosopography has shown that the families named on the second side were among the wealthiest in Roman society, and that some were certainly involved in moneylending. Even so, does it follow that the labels must have been used to certify the quality or amount of coinage?

Thus, this chapter considers whether any corroborating evidence for Herzog's hypothesis exists, and interrogates the ability of the *tesserae* to serve as security devices. I review therefore the security mechanisms used on transported goods throughout the Roman Empire. Placing Herzog's *tesserae* alongside other seals and labels used in transport is necessary to understand how the *tesserae* functioned.

I also present evidence here for my hypotheses for their function. While the prosopography of families named on the second side would lend itself to the interpretation that these labels were used by individuals associated with financial activities, I argue that the *tesserae*

certified the inspection of precious goods displayed or stored in temples, *scholae*, and private homes. This claim rests on a synthesis of the comparative evidence, the chronology of the changes in form, material used, and geographic distribution. I further propose that it is mistaken to limit the *tesserae* to certifying one type of object. The physical form was clearly adapted from *tesserae lusoriae* or tribal ones, or both, and the inscriptional formula could fit multiple types of objects.

## 8.2 Corroborating evidence?

The art historical record for the use of Herzog's *tesserae* is disappointing. To be sure, Roman frescoes and sarcophagi commonly depict bags of money in the context of banking, and also as a symbol of personal wealth. *Argentarii* and *nummularii* counting money frequently appear on reliefs. A fragment of a sarcophagus from Ravenna shows money, removed from its container, being counted on a table.<sup>411</sup> Elsewhere, bags are depicted with their contents spilling out on a banker's table (Fig. 8.1).<sup>412</sup>



Fig. 8.1. Relief of banker counting money from Buzenol, Belgium. From Andreau (1987), fig. 17. On some reliefs, money has not yet been deposited on the table and is instead carried by

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<sup>411</sup> Andreau (1987), fig. 11.

<sup>412</sup> *Ibid.*, fig. 10-12,15-17.

an attendant in a bag hoisted over his shoulder (Fig. 8.2).<sup>413</sup> Yet in no instance is a label visible in the images. Perhaps this is unsurprising, given Andraeu's argument that these *tesserae* were not used by public bankers such as *argentarii* and *nummularii*.



Fig. 8.2. Relief of banker from Rome. From Andraeu (1987), fig. 14.

The only imagery of *tesserae* I have found is on Roman coinage. The closest possible evidence corroborating Herzog's hypothesis occurs on the coin of moneyer Lollius Palicanus, perhaps the son of a praetor in 69 BCE, Marcus Lollius Palicanus. As moneyer in 45 BCE, Lollius Palicanus was responsible for a *sestertius* bearing images of a container (*olla*) and a *tessera* (Fig. 8.3).<sup>414</sup> There has been much debate over what type of *tessera* is represented here. Wiseman confidently identified it as a "bank-*tessera*."<sup>415</sup> He dismissed Ross Taylor's identification of a voting urn and ballot because "the ring handle and lack of an inscribed legend show that it is not a voting tablet."<sup>416</sup> Crawford considered both possibilities. He was more

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<sup>413</sup> Andraeu (1987), fig. 13-15.

<sup>414</sup> Crawford (1971), pl. LV, 473/4.

<sup>415</sup> Wiseman (1971), 85.

<sup>416</sup> Wiseman (1971), 238.

critical of the voting urn and ballot identification, noting the lack of similarity between the images on the coin of Palicanus and voting imagery on other Republican coins. He also cited Cicero's use of an *olla* for holding money.<sup>417</sup> Nicolet argued that the *tessera* on the reverse was either a *tessera frumentaria* or an identity token that would be provided in the *comitia* in exchange for a *tabella* for public voting.<sup>418</sup>



Fig. 8.3. Sestertius of Lollius Palicanus with an *olla* on the obverse, and on the reverse a *tessera* and the inscription *PALIK ANUS* as a border. British Museum photograph of BNK,R.855: © The Trustees of the British Museum (CC BY-NC-SA 4.0).

For certain, the image on the reverse cannot be definitively identified as an example of Herzog's *tesserae*. It is true that with a circular head, distinct neck and rectangular body the *tessera* resembles the Republican types of Herzog's *tesserae*, as well as *tesserae lusoriae* and tribal *tesserae*. Since publishing his work on tribal *tesserae*, Crawford has dismissed the argument that the *tessera* was not associated with voting because tribal *tesserae* closely resemble the *tessera* on the reverse of the coin.<sup>419</sup> The fact is that images on Roman coinage cannot always be securely identified.<sup>420</sup> A denarius of Lucius Roscius Fabatus shows Juno Sospita on the

<sup>417</sup> Crawford (1974), 483, no. 473. Cicero, *Ad Fam.* 9.18.4.

<sup>418</sup> Nicolet (1976), 200-201 and 272-273.

<sup>419</sup> Crawford (2002), 1132.

<sup>420</sup> Dunbabin (2010), 307, remarks on the difficulty of distinguishing between prize amphorae and the urn for choosing lots on coins depicting imagery of agonistic festivals. Aldrete (2014), 446, notes the difficulty of interpreting iconography on coins due to our ignorance of the intended audience and the intended reception of the

obverse, and a girl facing a snake with a *tessera* or “control symbol” behind her on the reverse (Fig. 8.4). This denarius is dated to 64 BCE.<sup>421</sup> In 1974, Crawford noted that the control marks on this type of coin from L. Roscius Fabatus were one of many “everyday objects” that he typically used for the purpose.<sup>422</sup> The *tessera* on the coin of Palicanus could also be interpreted this way, although, given the morphology of the *tessera* on the reverse and the presence of an *olla*, I consider a tribal *tessera* the most plausible identification.



Fig 8.4. Denarius of Lucius Roscius Fabatus of 64 BCE shows Juno Sospita on the obverse and a *tessera* behind a girl on the reverse. British Museum photograph of 2002,0102.4091: © The Trustees of the British Museum (CC BY-NC-SA 4.0).

The text inscribed on the coin of Palicanus names only himself and offers no pointer to the significance of the objects on either obverse or reverse. It is unclear whether the images are to be taken as referring to one concept or two. If they are meant to be taken together and do represent one of Herzog’s *tesserae* rather than a gaming or tribal *tessera*, perhaps we could credit that one possible use for them was attachment to a more permanent container than a cloth bag.

Notably, the *tessera* and the *olla* do not appear on the same side of the coin, and the former is not

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coin.

<sup>421</sup> Crawford (1974), 424. Cf. AN620599001001; Ghey, Leins, & Crawford (2010), 412.1.16.

<sup>422</sup> Crawford (1974), 439.



attached to the latter. If Wiseman's identification is correct, this would seem a unique instance where Herzog's *tesserae* may be associated with a container of coins. It is worth noting that we never have an image of a cloth bag tied close and a *tessera* attached. Similar *tesserae* do appear on Imperial coinage that post-dates Herzog's latest dated *tessera*. Thus a coin of Antoninus shows on its reverse the personified deity Annona wielding an object resembling a *tessera* with a circular head (or handle) and rectangular body taken to symbolize tokens related to the grain ration (Fig. 8.5).<sup>423</sup>



Fig. 8.5. Coin of Antoninus with his profile on the obverse, and Annona holding a *tessera* with circular head on the reverse. British Museum photograph of 1860,0326.27: © The Trustees of the British Museum (CC BY-NC-SA 4.0).

Curiously, *tesserae* with different shaped heads also appear on first century BCE coins. However, of the more than 12,000 Roman Republican coins in the British Museum's collection, only six have an image of a *tessera* on the obverse or reverse.<sup>424</sup> Of the six, only the coin of Lollius Palicanus has a *tessera* alone on one side. The remaining five display a *tessera* as a control mark alongside the profile of a deity, either Ceres, Juno, or Mercury wearing his winged

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<sup>423</sup> RIC III 757.

<sup>424</sup>See the British Museum's Online Catalogue, [https://www.britishmuseum.org/research/publications/online\\_research\\_catalogues/rrc/roman\\_republican\\_coins.aspx](https://www.britishmuseum.org/research/publications/online_research_catalogues/rrc/roman_republican_coins.aspx) and the printed catalogue: Ghey, Leins, with contributions by Crawford (2010).

helmet (Fig. 8.6).<sup>425</sup> The coin of moneyer Lucius Julius Bursius, dated to 85 BCE, has an image of a deity with symbols associated with Mercury, Apollo and Neptune on the obverse. Behind the deity's head and trident is a *tessera* ending in a pointed head, presumably as a control mark.<sup>426</sup> The British Museum's online catalog identifies the image on the coin of Lucius Julius Bursius as a "*tessera*."<sup>427</sup> The shape of the body resembles Herzog's *tesserae*, as well as tribal and gaming *tesserae*, but its head is quite unique, seemingly pointed at the top rather than rounded. It does not resemble the heads of bone or ivory *tesserae*.



Fig. 8.6. Denarius of Lucius Julius Bursius of 85 BCE shows a deity with Mercury's winged crown and Neptune's trident alongside a *tessera* on the obverse and Victory on a quadriga with the inscription *L IULI BURSIO* on the reverse. British Museum photograph of R.8317: © The Trustees of the British Museum (CC BY-NC-SA 4.0).

Interestingly, the family names of moneyers who minted coins with images of *tesserae* are not included among the names inscribed on the second side of Herzog's *tesserae*. It is true that Kay argues Lollius Palicanus could possibly be the Lollius mentioned on a *tessera* of 62 BCE (Cat. 26). Relying on Wiseman's prosopography, Kay notes that there was a M. Lollius on Delos.<sup>428</sup> While the former identification is possible, the latter is improbable. Regardless,

<sup>425</sup> AN620599001001; AN623469001001; AN6224780010010.

<sup>426</sup> Crawford (1974), 368.

<sup>427</sup> [https://www.britishmuseum.org/collection/object/C\\_R-8317](https://www.britishmuseum.org/collection/object/C_R-8317)

<sup>428</sup> Kay (2014), 126; *ILLRP* 747; Rauh (1993), 50.



inability to identify the type of *tessera* on this coin as a definite example of Herzog's *tesserae* leaves us with no corroborating evidence for Herzog's hypothesis that the *tesserae* were used to certify coinage.

### 8.3 3-D Reconstructions

I have 3-D printed to scale two examples, Cat. 25 (60 BCE) and Cat. 127 (32 CE), in order to understand how Herzog's *tesserae* might be attached to money purses or bags; which side would be visible if the perforation ran from the second through to the fourth side; and how secure the attachment is when only through the incised line at the top of the body, or through the perforation alone. The two examples are ones that I have studied, one from the Republican period and one from the Principate. Using the measurements collected, the physical *tesserae* were printed at scale. While the letter forms on the 3-D examples do not perfectly match the script used upon each *tessera*, the modern font selected is closely comparable.

I used a cloth purse made from a single piece of fabric, reflecting the type of Roman bag reproduced by Colin Andrews.<sup>429</sup> To accentuate the inscription on the *tessera*, I have painted the letters with red marker, as examples have been found with traces of red pigment (Fig. 8.7). It is not clear what material was used to attach a *tessera* to its object. None has been found with remains of the securing material. I selected cord for my reconstruction, although it is possible that a metal wire or chain may have been used. Lead labels with a similar perforation have been found with a metal wire.<sup>430</sup>

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<sup>429</sup> Andrews (2012), 90-92, reproduces a purse and seal box as they would have appeared in antiquity. For an ancient example recovered from Oplontis, see Civale (2003), 76, Fig. 4. The remains are of a leather purse adorned with gold decoration. It was found near Skeleton 7 and presumably contained the nearby coins, as well as gold jewelry with pearls, quartz and emeralds.

<sup>430</sup> See Frei-Stolba (1984), 133 no.15.



Fig. 8.7.a-d. Experimental reproductions of how Herzog's *tesserae* could be attached to a money-purse. a) Cord is attached through the perforation and around the *tessera*; b) Cord is only secured through the perforation; c) Cord is wrapped around the *tessera* through the incision; d) Cord is wrapped around the *tessera* three times.

Figure 8.7a affixes the reproduction of Cat. 25 to the bag through the perforation, and then winds the cord around the bag and the body of the *tessera* before knotting at the back of the bag. In Figure 8.7b, Cat. 127 is attached to the bag only by its perforation. In Figure 8.7c, we see the *tessera* attached to the bag using only the incised line at the top of the body, wrapping the cord around it once. Because this attachment is less secure than if the cord were threaded through the perforation, in Figure 8.7d its string is wound around the *tessera* twice more. However, I

doubt that this would be a reliably secure attachment for long-distance transport, as Herzog and Andreau envisioned. The *tessera* could potentially slip between the cord and the purse if it were only secured by the incision at the top. If the cord were wound around the incision at the top, it might obscure the text on the left side. A *tessera* with only an incised line, like the Rimini examples (Cat. 181-184), could not be attached to an object unless tied directly to it.

It emerges clearly from these tests that the perforation running from the second side through to the fourth emphasizes the text on either the first or third sides when attached to purse. In the scenario envisioned in Figure 8.7b, when a *tessera* is suspended from the bag by a perforation, the first or third side would be immediately visible. However, one of the other two sides might be visible from other angles or if the label were rotated.

More importantly, the type of security provided by Herzog's *tesserae* clearly emerges. The attachment itself via the perforation is secure, even though the *tesserae* themselves do not seem to provide physical security, because they could be easily removed without evidence of tampering. Could two security devices be used on bags of money? Was the *tessera* merely proof of certification, and an additional seal was added to protect bag's contents from being tampered with during transport?

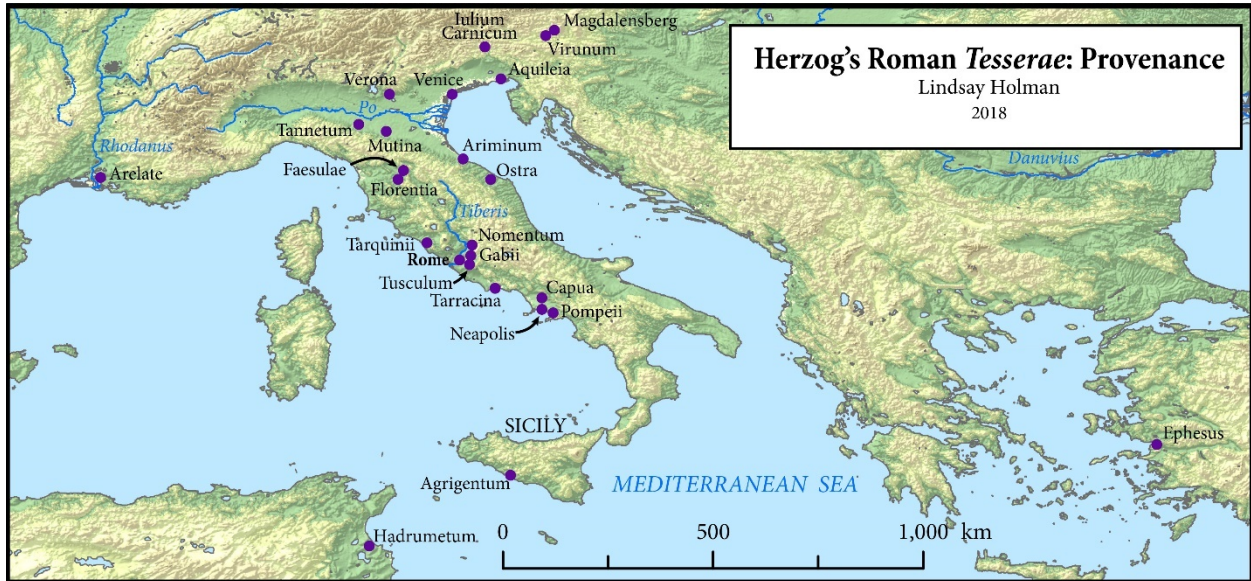
#### **8.4 Geographic Distribution of Herzog's *Tesserae* and Movement of Money**

As discussed in Chapters 2 and 4, information about the provenience of Herzog's *tesserae* is limited. Typically, at most the city in which they were reportedly found is recorded, although for many even this information is lacking. For those with a secure findspot, a pattern does emerge in peninsular Italy (Map 8.1). As Charles Barlow noted, the Italian examples from the Republican period were found in cities connected to Rome by major roads.<sup>431</sup> The

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<sup>431</sup> Barlow (1978), 117.

Republican examples found outside of Rome are concentrated at Capua, which can be accessed from Rome by the *Via Appia* or *Via Latina*, at Tarracina connected to Rome by the *Via Appia*, and at Tarquinii which is along the *Via Aurelia*.



Map 8.1. Herzog's Roman *Tesserae* Provenance.

The Principate witnesses a greater geographic spread that extends to Ephesus and Hadrumetum (modern Sousse, Tunisia). Within Italy, several *tesserae* were said to come from Naples, one each from Florence, Mutina, Tusculum, and Aquileia. Further archaeological excavation will no doubt expand the spread of finds. Many of the more recently discovered undated examples have been found further afield, such as those from Noricum (Cat. 162-170) and Agrigentum (Cat. 147).

While the Republican distribution pattern may support Herzog's argument that the *tesserae* were used on bags of money in transport, perhaps to and from Rome, the time involved in carving one would surely delay transport of money at short notice. The inability to transfer money from one bank to another, and the lack of a system of credit, likely meant that cash was

often used for financial transactions and that it moved frequently for a variety of reasons.<sup>432</sup> Note for example, a soldier's plea on a tablet from Vindolanda that his brother send five hundred *denarii* rapidly so that the letter writer could secure a purchase of grain.<sup>433</sup> Andrews (who does not mention *tesserae* for certification) proposes that in light of the language on the Vindolanda tablet, a trustworthy messenger must be chosen; further "for the peace of mind of both parties the money bag would need to be sealed."<sup>434</sup>

David Jones echoes the argument that the *tesserae* were used for securing bags of money and employing trustworthy agents for transport. He proposes that in moving large sums of money for purchase of property, for instance, *aurei* would have been used during the early Imperial period, and bags of coinage would have been sealed and then certified by *tesserae*.<sup>435</sup> I note, on the other hand, that while bone and ivory are durable materials, surely a lead certification would also have been as durable and more secure. Lead seals could have been stamped and affixed to strings to secure a package for transport. Jones' proposal for the use of ivory and bone *tesserae* for this purpose is that such materials were reserved for the instances where bags of money containing over one million *sesterces* (as the future emperor Galba supposedly always kept ready) were to be moved;<sup>436</sup> certainly the owner of such an amount might prefer a more prestigious material for his proof of authenticity.

What does the movement of money in the Roman Empire mean for the use of Herzog's *tesserae*? A transfer of money at short notice could have been held up by the task of carving the

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<sup>432</sup> Andrews (2012), 96; Howgego (1992), 28.

<sup>433</sup> Tab. Vindol. II, 343.

<sup>434</sup> Andrews (2012), 96.

<sup>435</sup> Jones (2006), 252.

<sup>436</sup> See Suetonius, *Galba* 8.1.

inscription in bone or ivory, and even carving the *tessera* itself. Moreover, someone would have been needed at the place of certification to inscribe a *tessera* on the date of inspection.

Gostenčnik has proposed the slaves named would have had the skillset to do this or they would normally have been accompanied by a scribe.<sup>437</sup> Even so, questions remain about how *tesserae* would have been manufactured and distributed for such a purpose. Were their bodies carved ahead of time in anticipation of use, and carried by the assayer who would then certify the coinage and inscribe the *tessera*? If the *tesserae* were used by *publicani* for certifying money intended for Rome, where were they manufactured? An exploration of sealing and security practices is needed for understanding the circumstances in which Herzog's *tesserae* would have been used to label bags of money, especially if more expedient, more secure, and cheaper sealing mechanisms also existed.

### **8.5 Signet rings and Seals**

There is ample literary and archaeological evidence for the use of signet rings (*signacula*) to seal important documents, containers of precious objects, and as stamps on a variety of commercial products. Pliny's *Natural History* Book 33 deals with rings, their material, and their application to protect objects. He believed that the use of signet rings began in the 4th century BCE onwards. Due to distaste for opulent displays of wealth (and also Rome's sumptuary laws), rings of iron predominated before gold rings were acceptable.<sup>438</sup> More significant is Pliny's claim about the link between moneylending and the use of signet rings. Pliny argues that use of coined money preceded the widespread use of signet rings in Roman society, and that usury prompted the use of signet rings, as even individuals of lower economic status wore and used

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<sup>437</sup> See Gostenčnik (1996), 130.

<sup>438</sup> *NH* 33.8-31.

them whenever a contract was drawn.<sup>439</sup> Throughout the book he moralizes about the growing amount of gold used in Roman society, even by slaves, and he repeats his refrain about the necessity of sealing objects, particularly with a signet ring.<sup>440</sup> Pliny bemoans the fact that his contemporaries were so untrustworthy that many even stamped food and drinks to prevent theft.<sup>441</sup> According to Pliny, physical security of objects was a growing concern in the first century CE, and signet rings used on wax was his preferred method for securing them.

Pliny was not the only author in the Roman Empire to suggest that protection of goods was paramount. Seneca complains that the Romans put more faith in a seal than their fellow man.<sup>442</sup> Wax seals could be melted and a sealed object opened, before being re-sealed.<sup>443</sup> Some Romans disposed of their signet ring before their deaths, so that their seals could not be forged.<sup>444</sup> Such rings were a marker of identity, notably of heirs when passed through generations. Suetonius relates the story of Tiberius when severely ill on Capri removing his ring to mark a successor, before placing the ring back on his finger before his death.<sup>445</sup>

Signet rings were used to seal packages, papyrus documents (such as the receipts from the Pompeian banker L. Caecilius Jucundus), and bronze military diplomas (Fig. 8.8).<sup>446</sup>

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<sup>439</sup> Pliny's, *NH* 33.6, complaint is confirmed in the archaeological record. According to Mouritsen (2011), 206, about two-thirds of approximately 90 examples of signet rings from Pompeii name freedmen. *CIL* X.8058. Cf. Cooley (2012), 102.

<sup>440</sup> Pliny, *NH* 33.6, first notes that in the 2nd century BCE praetors wore rings of iron, and then complains that in the first century CE even slaves were adding gold to their iron finger-rings. For his growing concern about sealing keys being insufficient to prevent theft, see *NH* 33.6. Concern for the influx of luxury and the deterioration of morals permeates his history of the use and material of rings in Roman society.

<sup>441</sup> *NH* 33.26.

<sup>442</sup> *De Beneficiis* 3.15.

<sup>443</sup> Lucian, *Alexander* 21. Lucian details Alexander of Abonoteichos' procedure for re-sealing wax seals on letters.

<sup>444</sup> Tacitus, *Annales* 16.19.

<sup>445</sup> Suetonius, *Tiberius* 73.2.

<sup>446</sup> See Henig (2007), 96. He suggests that the seals of the seven witnesses for military diplomas would have been impressed into lead. This seems to be confirmed by the five preserved seals and seven witness names inscribed on the military diploma found near Slavonski Brod, Croatia. It dates to the reign of Vespasian (February 9, 71 CE). For



Jucundus' receipts have the wax seals of witnesses applied in a groove in the wooden triptych over the knotted string used to seal the documents.<sup>447</sup> The seal was pressed to the wearer's lips, then into hot wax that had been dyed red; this then sealed the strings tying the documents closed.<sup>448</sup> In one of his letters, Pliny the Younger makes a remark about sealing a package to be sent in one of his letters to Trajan. It contained a nugget and was sealed with his ring.<sup>449</sup>

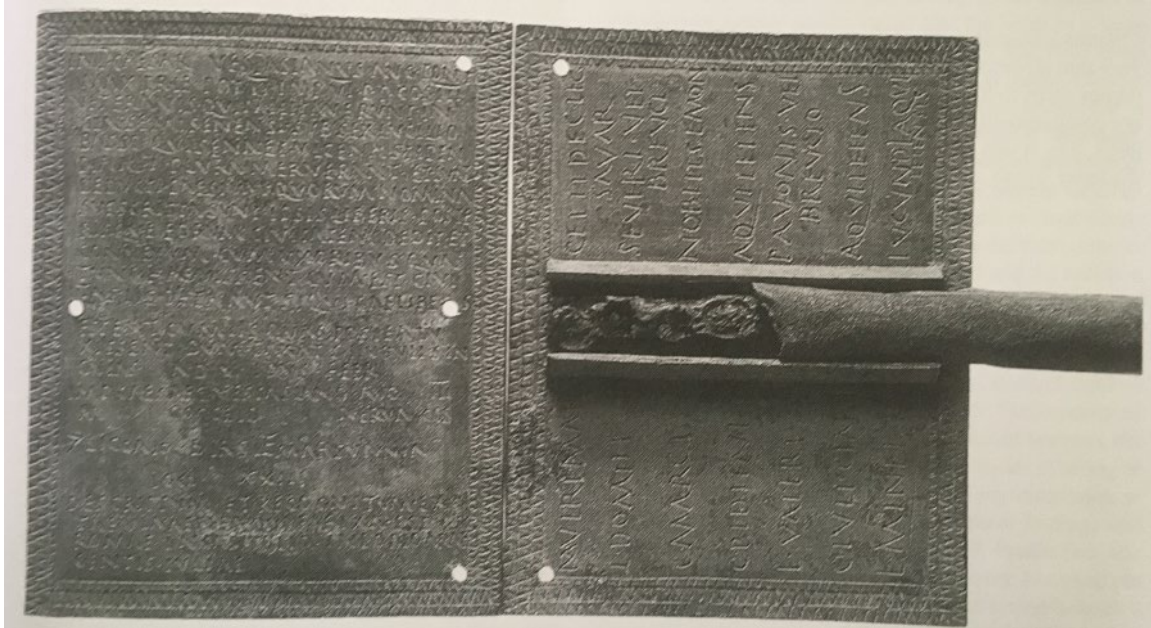


Fig. 8.8. A military diploma from Slavonski Brod, Croatia, has five of seven witness seals preserved, as well as the covering protecting the seals. Only four of the five seals are visible in the photograph. From Andrews (2012), 1, Fig. 1.

Signet rings could be of two types, so far as we can ascertain from archaeological finds.

One was made from precious gems with symbolic images in intaglio; the other, from metal with

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publication, see Roxan and Holder (2003), no. 204; for photos see Andrews (2012), 1-2, plate 1. The diploma is now in the Brodsko Posavlje Museum in Slavonski Brod, Croatia.

<sup>447</sup> Henig (2007), 96 and Fig. 6/4b.

<sup>448</sup> Marshman (2017), 143, for an overview. See also *CIL* IV.10247 for a graffito from Pompeii where the author claims that he wishes to be a gemstone for an hour so that he could be kissed by Primigenia Nucерina whenever she kissed her seal. Ovid, *Amores* 2.15. Cf. Ward-Perkins and Claridge, (1978), no. 17, for a wall painting found in Pompeii (House VIII) depicting a man holding a papyrus scroll with a red seal.

<sup>449</sup> Pliny tells Trajan that he sealed the package with a ring decorated with a four-horse chariot, *Ep.* 10.74. See also Henig's (1997), 96, outline of the use of seals in the Roman world.



the owner's name (Fig. 8.9).<sup>450</sup> Those signet rings with symbolic images were impressed into clay, wax, lead and even tin, although seal stones made from gems were not suitable for impressing in hot metal. Thus officials and merchants who regularly stamped their seal into hot lead or tin had specially designed metal signet rings for this purpose.<sup>451</sup>

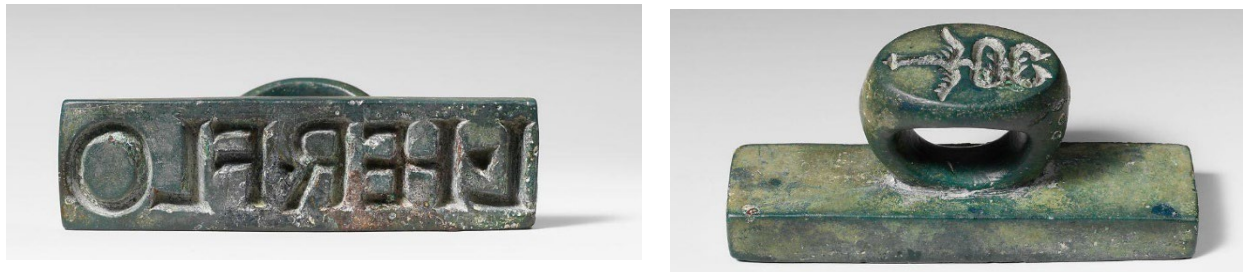


Fig. 8.9. Bronze signet ring found at Boscoreale with the inscription *L.HER.FLO* (left), and a caduceus incised on the ring which also could have been used as a sealing device (right). 87 mm long. Photographs: Metropolitan Museum of Art.<sup>452</sup>

Sealing practices varied across the Roman Empire. Even though Pliny the Elder claimed that Egyptians and others in the East did not use seals, but instead still used “letters alone” to seal documents,<sup>453</sup> the archaeological evidence from Roman Egypt shows the development of sealing practices for private letters there and the use of different types of seals for commercial and administrative objects. On private letters in the first century CE, ink patterns were used instead of pressed wax seals. These patterns were drawn over the top of a scroll and the underlying layer of the papyrus, showing when a letter had been read. Those letters with wax seals were sealed with figural impressions, or sometimes only fingerprints, without bearing a seal impression at all. Thus Katelijjn Vandorpe argued that seals on private letters were not to identify the sender, but to

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<sup>450</sup> Henig (2007), 94.

<sup>451</sup> Henig (2007), 94.

<sup>452</sup> For this item, see <https://www.metmuseum.org/art/collection/search/253046?searchField=All&sortBy=Relevance&ft=roman+signet+ring&offset=220&rpp=20&pos=233>.

<sup>453</sup> *NH 33.21: non signat Oriens aut Aegyptus etiam nunc litteris contenta solis.*

secure the letter from being tampered with in transit.<sup>454</sup> During the Roman period in Egypt, a new practice, now called “*Untersiegelung*” in the scholarship, was introduced on official documents (such as customs receipts). The documents were not sealed closed, but a clay seal was attached to the parchment or pushed through a tear in the papyrus.<sup>455</sup> These customs receipts utilized unbaked mud that was stamped with a seal bearing the regnal year of the Emperor.<sup>456</sup> Evidently, Pliny’s remarks about the lack of seals and use of simple writing to seal objects in Egypt must relate to the use of ink patterns on private letters.

Lead seals were used more widely in the Roman Empire outside of Egypt. However, for seals used by the Imperial administration, lead seems to have been the preferred material even in Egypt. A second century CE lead seal attached to a linen bag was sent from a financial officer in Alexandria by the Imperial post.<sup>457</sup> Imperial sealings on lead that note the transfer of certain dues have survived and show the dual function of the sealing. They both sealed the package and told the person inspecting the package that it was from the Imperial service and not liable to be charged duty.<sup>458</sup> Some provinces had seals to certify that goods had paid the proper taxes. Henig notes the seal of the *Statio Arelatensis* which was perhaps used to certify collection of the *quadragesima Galliarum* dues.<sup>459</sup> Lead seals with the regnal dates of the emperors were used on packages sent from Egypt during the first half of the second century CE and found in Lyons,

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<sup>454</sup> Vanderpe (2014), 144.

<sup>455</sup> Vanderpe and Van Beek (2012), 86-87.

<sup>456</sup> Vanderpe (2014), 148.

<sup>457</sup> See Vanderpe (1996), no. 302; Vanderpe and Van Beek (2012), 92. See further Vanderpe’s database entry: <https://www.trismegistos.org/seals/detail.php?tm=1193&i=1>.

<sup>458</sup> Henig (2007), 95. See *RIB* II, no. 2411.1-18, 20-28 with imperial portraits and no. 2411:19 and 39.

<sup>459</sup> Henig (2007), 96 and Fig. 6/11.

London, and Malta.<sup>460</sup> The latest dated lead seal shows the busts of Marcus Aurelius and Lucius Verus. It was found with traces of wood, suggesting that it once sealed a wooden crate.<sup>461</sup> Vanderpe has argued that these commercial seals identified those who produced or traded commercial goods, and that the sealing likely was not bound by law, “but was crucial for producers or businessmen in a context where their commodities were handled through agents.”<sup>462</sup>

The evidence from Egypt suggests therefore that in the context for which Andreau sees *tesserae* most suited – the transfer of money from one intermediary to another – containers were sealed and stamped with the name of the owner, not that of the agent operating on their behalf. But this is the opposite of what is found on Herzog’s *tesserae*. Perhaps the inclination in Egypt was to use cheaper materials than in Roman Italy. Yet it is then curious that on the more expensive and time intensive material the agent (slave or freedman) should be named in the nominative, and is meant to be read first.

Regardless, the abundance of signets and stamped seals from the Roman Empire indicates that the use of signet rings was widespread. Their lack of uniformity suggests there was no regulation for them.<sup>463</sup> The preference for lead seals in certain contexts does not negate Andreau’s hypothesis. Different labeling practices could have been used concurrently, as wax, clay, and lead seals were used for sealing different types of objects simultaneously. Andreau has acknowledged that sealing a bag of money with wax and a signet ring would be more practical

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<sup>460</sup> Cf. *RIB* II, 87-124 and Henig (1997), 91.

<sup>461</sup> Vanderpe (1996), nos. 303-307. See further Vanderpe’s database entry: <https://www.trismegistos.org/seals/detail.php?tm=1198&i=6>.

<sup>462</sup> Vanderpe (2014), 147.

<sup>463</sup> Henig 1997, 91.

than using a *tessera*.<sup>464</sup> There is both legal and (possible) material culture evidence for the use of seals and labels affixed to bags of money,<sup>465</sup> and for regional variation in sealing practices. However, Herzog's *tesserae* provided security for the inspection, even if they could not seal a bag in the same way as wax and lead seals.

## Section 8.6 Seal-boxes

Anxiety over the security of seals – a matter of acute concern to Pliny and others – was the impetus for creating an extra security measure to protect seals from tampering. Like Herzog's *tesserae*, seal-boxes are not well understood and their function is debated. They seem to be known exclusively from the archaeological record (hence the English term for this category of evidence). They are hinged boxes primarily made of copper alloy, measuring between 2 and 5 centimeters in diameter, with between three and five drilled holes (Fig. 8.10). Seal-boxes vary in shape, but the most common forms are circular, "leaf or piriform," square and rectangular.<sup>466</sup> Some were made from ivory or bone. They seem to have been used to protect wax seals.<sup>467</sup> Many have argued that they were used to protect seals on documents that were being moved.<sup>468</sup> The earliest seal-boxes have been dated to the 1st century BCE and the latest ones to the third century CE.<sup>469</sup> Similar to Herzog's *tesserae*, the form and decoration move from simple to more complex, as enamel decoration was added beginning in the 2nd century CE.<sup>470</sup>

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<sup>464</sup> Andreau (1999), 84.

<sup>465</sup> Money sealed by a signet ring: Afranius, *Dig.* 46.3.39. Lead labels: Manganaro (1989), 193-194.

<sup>466</sup> Andrews (2012), 1. See also Andrews (2012), 12-44, for his Catalogue of Shapes.

<sup>467</sup> See Derks and Roymans (2002), 91 n. 23, for the bibliography of seal-boxes made of bone (two examples), ivory (one), tin (two from Lyon), and lead (three from Sisak). They argue that due to the "conditions necessary for their preservation" fewer made from bone or ivory have survived. Yet, Herzog (1937) and Andreau (1987), 490, argue that for *tesserae* these materials are advantageously durable.

<sup>468</sup> Derks and Roymans (2002), 91. Cf. Colin Andrews (2012), 1.

<sup>469</sup> Derks and Roymans (2002), 91.

<sup>470</sup> Derks and Roymans typology: (2002), 92-93. Henig (1997), 91, proposed that enameled seal-boxes were

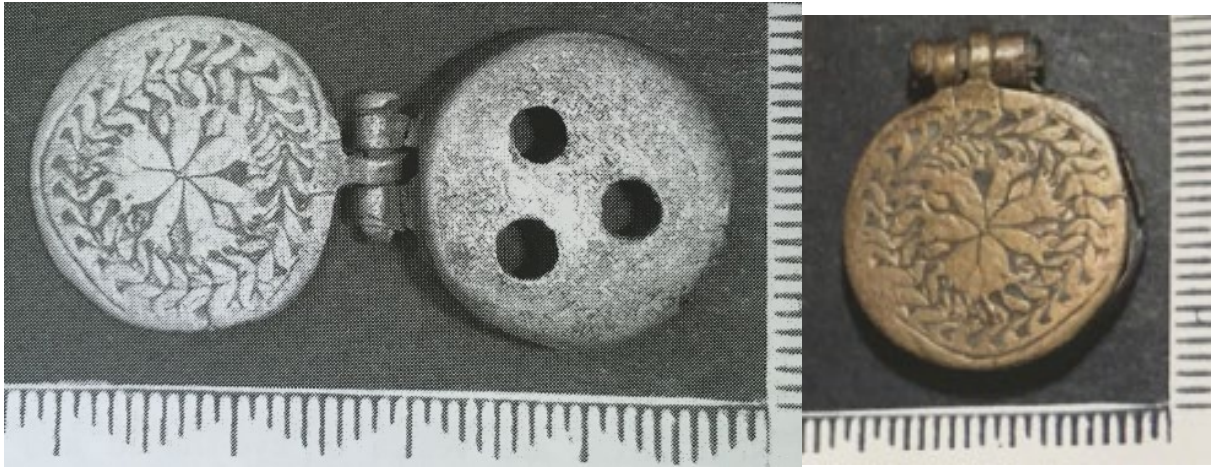


Fig. 8.10. Circular copper seal-box found in London. From Andrews (2012), no. 38: fig. 37 and pl. 5.

Ton Derks and Nico Roymans argue that seal-boxes were particularly used for wax tablets rather than leaf ones (such as have been recovered at Vindolanda), because the latter lack the distinctive notches or holes for attaching strings that were then sealed with wax.<sup>471</sup> However, Andrews has proposed that they were in fact used to enclose seals attached to leather or linen purses carrying money or precious goods.<sup>472</sup> Andrews' argument hinges on the context of important finds from Britain and the Rhine frontier. In his experimental archaeology section, he illustrates how seal-boxes could have been used on moneybags (Fig. 8.11), pointing specifically to hoard finds from Snettisham, Trier and Kalkriese containing money, precious metal objects, purses and seal-boxes.<sup>473</sup> Meanwhile, no writing tablet has been found with a seal-box attached. One wooden writing tablet in the National Museum of Antiquities in Leiden, originally found in Egypt, was purportedly associated with a round seal-box. However, the association is suspect,

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produced in the same workshops as enameled brooches.

<sup>471</sup> Derks and Roymans (2002), 91

<sup>472</sup> Andrews (2012), 80-98.

<sup>473</sup> For the late second century seal box associated with the jewelry and coin hoard at Snettisham, see Johns (1997). The hoard contained remnants of two woven textiles. Johns even suggested that the engraved gems seemed the most likely item to be sealed in a linen bag. For Trier, see Gilles (1994). Even Derks and Roymans acknowledge that the Trier hoard was most likely associated with a money purse, rather than a writing tablet: (2002), 90 n. 14. See also Andrews (2012), 81-82, for a discussion of these hoards.

and it is likely that the seal-box was not originally attached to the writing tablet.<sup>474</sup>

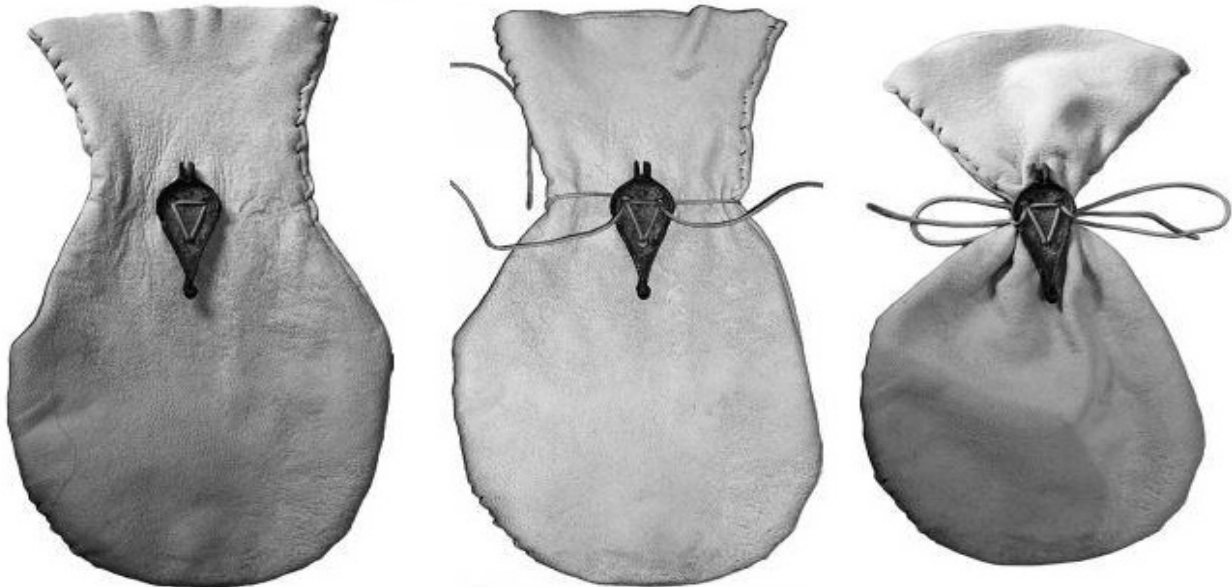


Fig. 8.11. Andrews' experiment demonstrating how seal-boxes could be attached to protect seals on bags of money. The first image shows the base of a leaf-shaped seal-box stitched to the bag. The next shows how the string was threaded through the seal-box. The third image shows how the string was then knotted at the back of the purse. From Andrews (2013), 434 fig. 16.

If Andrews is correct that one of the functions of seal-boxes was to seal bags holding coins or precious goods, then bags with this sealing mechanism would render a *tessera* unnecessary in securing the bag. The *tessera* would need to be tied at the back, after the seal and seal box were attached (Figure 8.7). Or more likely the string would need to be threaded through both the base of the seal box and the perforation of the *tessera*, so that they were used side by side. In this way, the text of the *tessera* would be as visible as if it were attached to the bag on its own. It is possible that the *tessera* could have provided legal security for the transaction, while a seal box provided additional physical security for the seal. If a seal box protected a seal, the image or text of a person's seal would no longer be visible. And yet to affix both devices to the same purse is less efficient and more costly than using a lead label, which could be stamped and

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<sup>474</sup> Derks and Roymans (2002), 90; Andrews (2012), 87,

simultaneously fasten the purse's strings.

Admittedly, Andrews' work is a case-study of British examples. He notes that "seal-boxes are not uniformly distributed throughout the empire and do not appear to be as common in Italy, for example, as they are in the north-west provinces," while also giving the caveat that "the research has not been done so no claims about this [rarity of seal-boxes in Italy] can be made."<sup>475</sup> Thus, the geographic overlap of seal-boxes and Herzog's *tesserae* cannot yet be determined. Perhaps they were two security devices used in different parts of the Roman Empire, as the currently tentative distribution of the seal-boxes suggests. Yet Andrews, as well as Derks and Roymans, have all noted a distinct connection with military sites in their distribution along Britain's northern frontier and the Rhine.<sup>476</sup> Andrews cautions that when considering the distribution within an entire province, a different pattern emerges. Notably, in Britain there was a larger association with settlements having connections to trade when the distribution of nearly 600 examples from the entire province is mapped (Map 8.2). Roman London has a concentration of finds in its forum and along the river, where large quantities of imported pottery and lead seals were also recovered.<sup>477</sup> And while Derks and Roymans' study is focused on the Rhine, rural and private contexts here yielded seal-boxes, including two from burials in Nijmegen (*Noviomagus*) and an astounding twenty-six from the temple complex at modern Empel, both in the Netherlands.<sup>478</sup> At South Shields in Britain, lead seals and seal-boxes from stratified excavations would suggest that these sealing devices were used concurrently, while (as Andrews posits)

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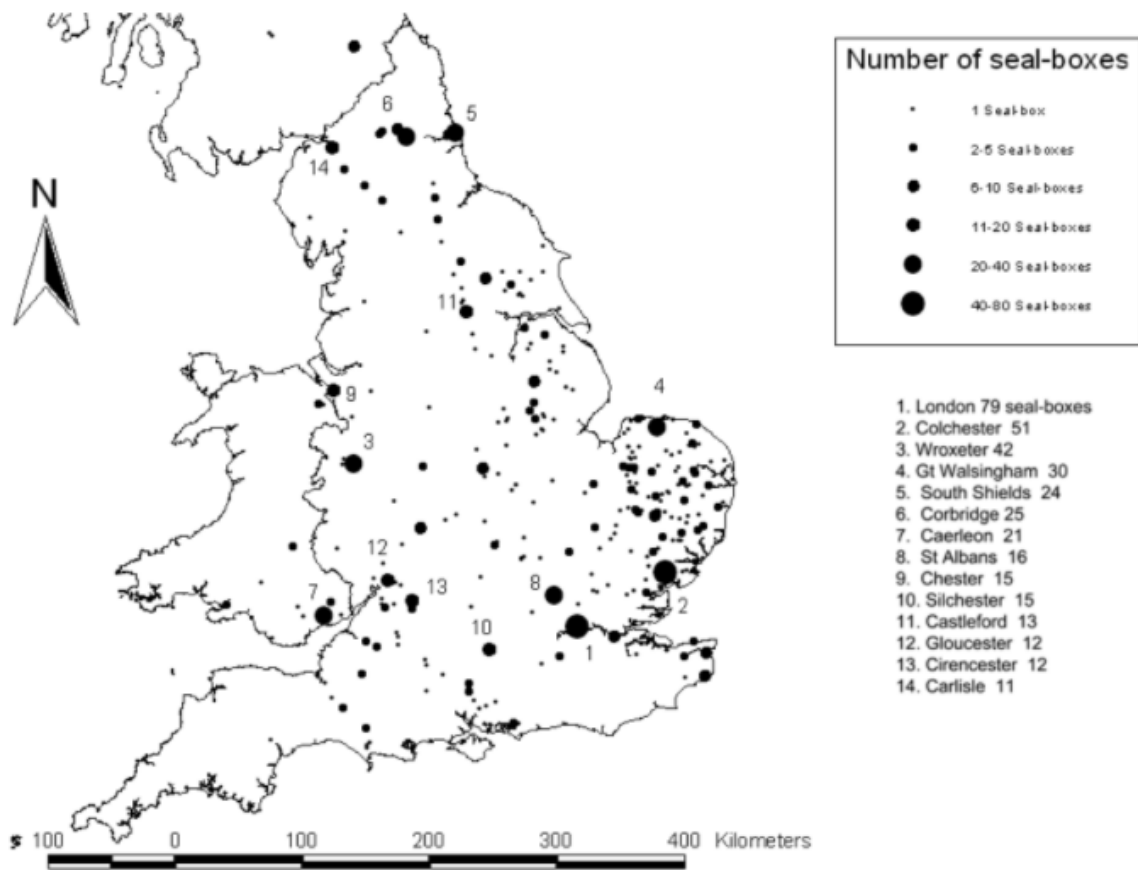
<sup>475</sup> Andrews (2012), 109.

<sup>476</sup> Andrews (2013), 428; Derks and Roymans (2002), 91.

<sup>477</sup> Andrews (2012), 53; Andrews (2013), 428-430.

<sup>478</sup> Derks and Roymans (2002), 94-95.

serving different purposes.<sup>479</sup>



Map 8.2 Distribution of seal-boxes found in Britain. From Andrews (2013), 429 fig. 4.

If a package of money could have been sealed with a signet ring, especially one made from metal and incised with a personal name, then an additional *tessera* tied to the bag would have been superfluous. These sealing and security devices could have been used contemporaneously for different purposes. If, as Andreau suggests, the *tesserae* were particularly used when bags of money changed hands (especially large sums handled by the *publicani*) then would not the amount of money have required that the container be sealed more securely? While the *tesserae* are made of durable materials, they would hardly be suitable for fastening objects.

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<sup>479</sup> Andrews (2012), 71. See also Andrews (2012), 97, for discussion of Holmes' theory that lead seals supplanted seal boxes. Andrews dismisses this notion, given that molten lead is less suited for sealing letters than other materials.



Surely, their function is not additional physical security, but security to the owner that the object has been carefully inspected. Fourteen examples are missing the ends where holes were drilled through, but whether this is intentional damage or the resulting strain when securing the label to its object is unclear. Perhaps the *tesserae* were used in tandem with a seal.

### Section 8.7 Alternative Uses

The material chosen for Herzog's *tesserae*, the layout of information and physical characteristics would all suggest that they were produced and inscribed for a purpose that was not as mundane as certifying coinage. For expediency of daily economic transactions, a faster and less expensive method of sealing and certifying coinage would have been preferred. While even now the provenience of few of Herzog's *tesserae* is known, recent finds could lend support to a different function.

These *tesserae* have been found in both public and private contexts. Across Italy, they have been found on the Esquiline and Aventine Hills in Rome, Regio IX of Pompeii, and the theater of Faesulae (modern Fiesole).<sup>480</sup> However, several have been found in or near funerary contexts. One was recovered from a burial dated much later than the *tessera* itself in Mutina (modern Modena), another was found in a tomb in Capua, and one was discovered near Augustus' mausoleum in Rome.<sup>481</sup> The most recently excavated *tessera* was recovered from what excavators identify as a ritual deposit at House M in Agrigentum.<sup>482</sup> This example bears no consular date but has a head similar to Republican Types 1 and 2; it was intentionally deposited with ceramic remains. The *tessera* from Mutina was found in a cremation burial that dates to the

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<sup>480</sup> Faesulae: Cat. 9; Aventine Hill: Cat. 41; Esquiline Hill: Cat. 22 and 57; Pompeii: Cat. 61.

<sup>481</sup> Capua: Cat. 153; Rome near Augustus' mausoleum: Cat. 39; Modena: Cat. 85.

<sup>482</sup> Cat. 147; Belfiori (2020), 11-14.

second century CE, along with two glass *unguentariae* dated to the first half of the first century CE, two second century CE bronze coins of Trajan and Antoninus Pius, as well as a few common coarse-ware pottery cups.<sup>483</sup> The *tessera* itself is dated to Tiberius' consulship of 13 BCE.<sup>484</sup> Further excavation of domestic and mortuary contexts may produce additional *tesserae* that were deposited intentionally. The provenience and chronology of these deposited examples suggests that the meaning of these *tesserae* changed over their lifetimes. Objects associated with chance were commonly deposited in burials across the Roman world.<sup>485</sup> Cat. 85 and Cat. 147, due to their resemblance to *tesserae lusoriae*, could have been associated with games of chance when they were deposited.

One *tessera* found in the temple of Magna Mater in Rome and another found by a temple complex in Gabii could suggest that they were used to certify offerings displayed or goods stored in a temple.<sup>486</sup> There is literary and epigraphic evidence that Roman temples were used as a location to safeguard precious possessions, including money.<sup>487</sup> In this way, temples served as the earliest banks, if we define banks as a location in which people might store their most valuable items for safe-keeping.<sup>488</sup> Temples certainly accepted deposits that were not used as collateral in loan agreements,<sup>489</sup> and lent out money from their own funds. The most obvious

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<sup>483</sup> Benassi (2011), 71.

<sup>484</sup> Cat. 85.

<sup>485</sup> Banducci (2015), 211-215. Crummy (2007), 352-356.

<sup>486</sup> Magna Mater: Cat. 47, Pensabene (1987), 69-76; Gabii: Cat. 146, Glisoni et. al. (2017), 26.

<sup>487</sup> Stambaugh (1978), 585-586. See also Frank's (1933), 350, comments about frequency of deposits in temples "in the East" at no interest, and the distinction he makes with deposit activities in Rome (where he claims deposits "at times" were made at banks with no interest).

<sup>488</sup> Denva (2019), 98.

<sup>489</sup> See Millett's (2012) comments that temples loaned money from their own funds, rather than operated as deposit bankers. He draws a similar distinction between those moneylenders "who lent from their own resources" and professional bankers such as defined by Andreau (1987) and Bogaert (1968).

example is the temple of Saturn in Rome, which held the state treasury.<sup>490</sup> Its priests may even have guarded legionary standards.<sup>491</sup> Juvenal jests that men stored their money (and perhaps other possessions) in the temple of Castor, rather than of Mars Ultor, after the latter was ransacked and its possessions were stolen.<sup>492</sup> Epigraphic evidence shows that banking business in Rome congregated around the temple of Saturn in the Forum, but other temples too, such as of Castor, Mars, and Ops, were places in which individuals housed sums of money or prized objects, due to the protective capacities of these deities. Temples were known to house art that had made its way to Rome through conquest or exploration.<sup>493</sup> The security of these temples lent itself to protection of private goods and display of expensive donations.<sup>494</sup>

Headquarters (*scholae*) or temples of *collegia* also housed gifts donated by members and patrons. Inscriptions detailing the expensive gifts donated by members of *collegia* are well attested.<sup>495</sup> From an inscription recording gifts to a guild headquarters in Ostia (dedicated in 143 CE), donations, including silver busts of the Imperial household, a candelabra, benches, and other furniture, are recorded. Once on display in such surroundings, donations could have been labelled with a *tessera* attesting their inspection.

Herzog's *tesserae* could also have been used in homes as a record of safe-keeping precious objects. They are well suited for attachment to objects that would not be transported, providing a conspicuous attestation of inventory that verified the inspector and the date of

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<sup>490</sup> Gorski and Packer (2015), 227; Denova (2019), 98; Varro, *Ling.* 5.183.

<sup>491</sup> Gorski and Packer (2015), 227. Livy 3.69.8, 7.23.3.

<sup>492</sup> *Sat.*, 14.260-262: *ad vigilem ponendi Castora nummi/ ex quo Mars Vltor galeam quoque perdidit et res/ non potuit servare suas*: "the money must be placed with watchful Castor, since Mars Ultor lost his helmet and was not able to save his own possessions."

<sup>493</sup> For bibliography, see Stambaugh (1978), 586-587; Gorski and Packer (2015), 289.

<sup>494</sup> Stambaugh (1978), 586. Malkin (2012).

<sup>495</sup> *AE* 1940.62; Meiggs (1973), 325.

inspection. The inclusion of the year on 142 of Herzog's *tesserae* affirms that this information was significant. The specific date, lack of address, and presence of a perforation would suggest that these labels remained with their object for longer than a day, perhaps over a year, in a location that need not be noted on the label itself. Susan Treggiari notes the epigraphic evidence for the varied staff positions in elite households in Rome, several of which involved the care and upkeep of precious objects there. There were separate custodians for silver objects (*ab argento*), pictures (*a tabulis*), and statues (*a statuis*).<sup>496</sup> Both slaves and freedmen held these positions. Freedmen in charge of silver are well attested for the Imperial family,<sup>497</sup> and Musicus Scurranus, slave of Tiberius and *dispensator* of the *fiscus Gallicus* at Lugdunum, had two attendants for this function with him among his fifteen personal servants on a visit to Rome when he died.<sup>498</sup>

Private use of these *tesserae*, certifying precious objects that would be on display or stored in a temple, home, or *schola*, could explain certain gaps in the date range during which new *tesserae* apparently were not produced. At least, as it happens, no *tesserae* are known to have been manufactured between 42 and 34 BCE and again between 32 and 28 BCE, during the civil war between Antony and Octavian and between the Battle of Actium and Octavian's "First Settlement" with the senate. Prized objects were perhaps hoarded, then, even buried for protection, rather than entrusted to temples to protect them.<sup>499</sup>

There also happen to be shorter gaps in the first century CE, between 33 and 39, 45 and

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<sup>496</sup> Treggiari (1973), 253-254.

<sup>497</sup> *CIL* VI 3941, 4232, 4231, 4425, 5186, 5746, 4426, 5539.

<sup>498</sup> *ILS* 1514: *Epaphra ab argent. ... Anthus ab arg.*

<sup>499</sup> In the case of a late Republican hoard of silver tableware, purportedly from Tibur (modern Tivoli) and currently in the collections of the Metropolitan Museum of Art and the Field Museum, some have argued that this silver was buried during the civil wars and proscriptions to protect such prized possessions. For the portion of the hoard from the Metropolitan, see Picón (2007), 339 and 483-434. For a full discussion of the hoard, see Oliver (1965), 177-185.

51, and 74 to 83. But it is only from 61 CE onward that a significant decrease in manufacture of these labels may be suspected. As few as eight *tesserae* which have a secure date from that date onwards are known currently, and none after 83 CE.<sup>500</sup> It seems more reasonable therefore to interpret this as a slow decline between 61 and 83 CE rather than an abrupt ending in 83 CE. It is also likely that more dating to this period and others have yet to be found.

Personal use of these objects to certify receipt and inspection of prized possessions, rather than as an official or private banking certificate, could explain the unique features of Herzog's *tesserae*. Attachment only to luxury items (on display or stored) might account for the sparse number of finds and the elite family names on the second side. It could also account for the three females and the *socii* named as owners. The date of inspection most often inscribed, the Kalends of January, is hardly a day for business. But a private census of a precious commodity on this auspicious day at the beginning of the year, is entirely plausible. Images incised on certain *tesserae* could relate to the patron deity of the *collegium* or that of the temple where inspected donations were displayed.

The possibility that Herzog's *tesserae* were also used to certify coinage need not be dismissed. Bone and ivory *tesserae* sharing a similar appearance could be used for different functions. Seal-boxes and lead and wax seals were all used to secure packages and documents, but have manifestly different appearances. Given the current geographic distribution, it is quite conceivable that the meaning of the shape and text of Herzog's *tesserae* evolved over time. To judge by their inscriptions, material, and distribution, however, it is most likely that they record the inspection for a precious object.

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<sup>500</sup> Cat. 138-145.

## Section 8.8 Conclusion

Herzog's hypothesis that the *tesserae* were used for certification of coinage relies heavily on the prosopography of those families named on the examples published by 1919, and on the abbreviation for *spectavit*. Other elements were less important to his interpretation. Since his landmark study, however, the corpus has increased by fifty percent, and the distribution pattern has evolved with published examples from secure contexts. These recent finds show that the *tesserae* were not intentionally damaged to prevent fraudulent reuse. Nor is there evidence of their texts being altered, erased, or written over. The small number that were kept after manufacture and deposited well after the inscribed date (including Cat. 85 from Modena and Cat. 147 from Agrigentum) hints at the evolving meaning of these *tesserae*, an aspect that previous scholarship has not adequately addressed in its focus on identifying one concrete use for the entire category.

The present chapter has attempted to show other viable hypotheses for the function of Herzog's *tesserae*. These alternatives do not exclude the possibility that they were used to certify inspection of coinage. As with the physical form of the *tesserae*, it is entirely possible that the textual formula could have been adapted for multiple types of inspection. The striking similarities between the names on lead tags – used for labeling a variety of goods and containers – should suggest that the presence of nominative and genitive names need not mandate that a named slave would handle a certain type of object. Andreau entertains the idea that multiple types of labels, unknown at present, could have been used for the same purpose as Herzog's *tesserae*, since none of them state the amount of coinage.<sup>501</sup> This argument is advanced to reduce concerns about the date range. But it could also be applied to the *tesserae* themselves. They

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<sup>501</sup> Andreau (1999), 88.

could have been used in a variety of ways to label multiple object types not specified on them.

## CHAPTER 9: CONCLUSION

This dissertation set out to remedy two issues in the previous study of Herzog's *tesserae*. The first is the research tradition, which privileged inscribed texts over physical appearance. The study of the physical dimensions, design, and layout of text on Herzog's *tesserae* has yielded two significant results: there was a decisive change in design around the death of Caesar, and there is more variation in both the form and the inscriptions than previously thought. Admittedly, these are small variations of a relatively consistent physical type and textual formula. Yet focus on the texts as objects, alongside their wording, has further refined the chronology of manufacture by type, and has demonstrated that they were likely produced at multiple workshops, where craftsmen would have been familiar with the known type.

The separation of text from object was somewhat overcome by Attilio Degraffi's publication of a few examples in *Imagines* (1965), and by Andreau's work (1987), as well as by publication of museum collections (e.g. Mlasowsky, 1991). But the largest contribution has been made by the creation of digital epigraphic databases or online museum catalogs that publish photographs of at least one side. The online databases include descriptions of the physical form as well as discussion of the inscriptions. Nonetheless, these contributions remain scattered across epigraphic databases, excavation reports, and museum websites, each with their own conventions. Thus the British Museum online catalog typically provides one photograph of the *tesserae* on display and may not provide any photographs for those in storage. A search of the Epigraphic Database Roma for *tessera* returns over one hundred results: its entries provide consistent information, yet the examples of Herzog's *tesserae* are variously categorized, as either



*tessera*, *tessera nummus*, or *tessera nummularia*.<sup>502</sup>

Consequently, an essential component of this dissertation is a Catalog with the texts, measurements and images of all four sides of each *tessera* (when available). Naturally, I have been restricted to the *tesserae* I could locate in museums, and that curators allowed me to examine. I have not been able to find drawings or photographs of forty-two *tesserae* (approximately 23% of the corpus). Thanks to autopsy my Catalog has updated readings of 110 of the 184 examples. The presentation of texts alongside images shows the shift in textual layout over the period of manufacture. By these means the Catalog demonstrates its fundamental importance.

My second concern has been to re-evaluate the scholarship that uses Herzog's *tesserae* as proxy evidence for the sophistication of Roman banking. Since Herzog's publication, these *tesserae* have largely been considered banking instruments, and have been treated in studies of banking practices and the economic activities of the senatorial elite.<sup>503</sup> By contextualizing Herzog's *tesserae* within the use of labels and seals throughout the Roman Empire, I have grounded my interpretation of these objects within their wider context, rather than confining the focus to the narrow group of elite families attested on the second side. I have also sought throughout to give weight to the agency of the slave inspectors. In previous scholarship, the slaves named on the first side have been used to further identify a member of the family attested on the second side. While the prosopographic information for individual slaves is still lacking and specific identifications remain elusive, there can be no doubt that the layout and language of the text clearly emphasized the slave's role as inspector. It could be argued that these *tesserae*

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<sup>502</sup> Cat. 2 and 174 are called "*tessera, nummus*", Cat. 85 is "*tessera, nummularia*."

<sup>503</sup> See Wiseman (1971), Andreau (1987), Pedroni (1995), Jones (2006).

reflect the importance of these slaves and their seeming proud independence as inspectors, conveying authentication despite the lack of specification on the *tesserae* themselves of what type of object was certified.

In considering the varied materials and labeling conventions used within the Roman economy, I have tested possible parallels that have not been identified in earlier treatments of the *tesserae*. Hence, seal-boxes, lead *tesserae*, and *tesserae lusoriae*, show that an object of the same form could have physical and textual similarities, but serve different although related functions. The function would be underlined by a similar theme, thus seal-boxes served as physical protection, *tesserae lusoriae* could have been used for different games of chance, and Herzog's *tesserae* provided authentication. Versatility of function could apply to a variety of objects that called for a record of inspection. Given how the form of *tesserae lusoriae* and tribal *tesserae* was adopted in Types 1 and 2, it is not a stretch to imagine that the textual formula too was adapted over time, a shift that could explain the deviations most noticeable on the undated examples and those found at Magdalensberg.

A severe limitation for understanding where and how Herzog's *tesserae* were used is the lack of provenience for many examples. Nevertheless, the identification of recent finds is expanding the geographic distribution. No single pattern of deposition is yet visible, however. The *tesserae* have been recovered both in very public spaces, such as the Roman Forum and the theater in Faesulae, as well as in private domestic and mortuary contexts. How is the divide between the public and private find spots to be explained? Recent scholarship underscores that items of material culture can retain their "associations, functions, and meanings from when they were previously used,"<sup>504</sup> and at the same that their meanings are "always tied into ongoing

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<sup>504</sup> Banducci (2015), 217.

transformation.”<sup>505</sup> The physical form shared between Republican examples, *tesserae lusoriae*, and tribal *tesserae* (as well as *sortes*) could explain why some of Herzog’s *tesserae* appear in funeral contexts much later than their original production date. It is possible that Herzog’s *tesserae* from the burial in Mutina (Cat. 85), as well as in the domestic “ritual” deposit in Agrigentum (Cat. 147), could have been confused for gaming pieces or *sortes* by those who deposited them at a later date, or that the object had taken on an entirely different function at the time of deposition. The meaning of almost any object at deposition seems inaccessible, due to a multiplicity of possible meanings. Even so, the recent finds at least demonstrate that some of these objects were kept or handed down, with no evidence of reuse or destruction. They were prized objects themselves, intricately carved in bone or ivory.

The association of Herzog’s *tesserae* with senators and equites involved in moneylending and business ventures cannot be denied. I argue, however, based on the physical, geographic, and comparative evidence for the *tesserae*, that they were not used exclusively as labels for the certification of money. Rather, I contend that they are most likely to have been used in a private context for the regular, periodic inspection of precious items, perhaps including money, whether displayed or stored for safe keeping.

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<sup>505</sup> Brittain and Harris (2010), 589.

## **APPENDIX 1: CATALOG OF HERZOG'S ROMAN *TESSERAE***

See Chapter 4 section 3 for discussion of the organization of this Catalog. I have abbreviated the current locations when possible, either by museum name or its location. Notable exceptions are the Louvre and Musei Vaticani. The abbreviations are listed below. I provide the museum inventory number in parentheses following the abbreviation.

Aquileia	Museo Archeologico Nazionale di Aquileia
BM	British Museum
BNF	Bibliothèque nationale de France, Paris
Fitzwilliam	Fitzwilliam Museum, Cambridge UK
Fiesole	Museo Civico Archeologico, Fiesole
Florence	Museo Archeologico Nazionale di Firenze, Florence
Hannover	August Kestner Museum, Hannover
Magdalensberg	Archäologischer Park Magdalensberg
Modena	Museo Civico Archeologico Etnologico di Modena
Naples	Museo Archeologico Nazionale Romano di Napoli
PP	Petit Palais, Paris
Palazzo Massimo	Museo Nazionale Romano, Palazzo Massimo alle Terme, Rome
Rimini	Museo della Città, Rimini
Terme	Museo Nazionale Romano, delle Terme di Diocleziano, Rome
Verona	Museo Archeologico al Teatro Romano, Verona
Vienna	Kunsthistorisches Museum Wien

1: November 96 BCE

Current Location BNF (Froehner 2); LH inspected in 2017  
Findspot once in Rome with Castellani (*CIL* I<sup>2</sup> 889)  
Material Ivory  
Length 46 mm  
Width 9 mm  
Height 8 mm  
Perforation diameter 2 mm  
Text height 2 mm



Text *CAPUTO.MEMMI*  
*MEN.NOVE*  
*CN.DOMIT.C.CAS*  
*SPECT*

Bibliography *CIL* I<sup>2</sup> 889  
Babelon 1928, pl. II no. 23  
Herzog 1937, no. 14  
*ILLRP* 1001

2: Nones (5<sup>th</sup>) April, 94 BCE

Current Location BNF (Froehner 3); LH inspected in 2017

Findspot Rome (1893, Froehner vol. 5, p. 287)

Material Ivory

Length 43 mm

Width 7 mm

Height 6 mm

Perforation diameter 2 mm

Text height 2 mm



Text *PILOXEN.SOC.FER*  
*C.COIL.L.DOM*  
*SPECTAVIT*  
*N.APR*

Line 2 transl.: Piloxenus, association of iron workers

Bibliography Babelon 1928, pl. II no. 22  
*CIL* I<sup>2</sup> 2663a  
Herzog 1937, no. 15  
*ILLRP* 1002

3: 93 BCE

Last known location Rome (Garrucci, *CIL* I<sup>2</sup> 890), since lost (*ILLRP* 1003)  
Findspot Tarracina  
Material Bone (*CIL* X 8070, 1)  
Length No record  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record  
Drawing Garrucci 1877, Tab. II no. 7



Text *MENOPIL·ABI·L·S*  
Symbol (lightning ?)  
*SPECTAVIT*  
*C·VAL·M·HER*

Bibliography Garrucci 1877, no. 933  
*CIL* X 8070, 1=I<sup>2</sup> 890  
*ILS* 5161d  
Herzog 1937, no. 16  
*ILLRP* 1003

4: Nones (5<sup>th</sup>) February, 86 BCE

Last known location Naples (Bourguignon Collection, *CIL* I<sup>2</sup> 891, *ILLRP* 1004) or in Sambon's Collection (1911)

Findspot near Capua

Material Ivory

Length 34 mm

Width No record

Height No record

Perforation diameter No record

Text height No record

Photos/Drawings None

Text *DARDA.BAB*  
*NON.FEBR*  
*SPECT*  
*L.CORN.L.VAL*

Bibliography *CIL* X 8070, 2=I<sup>2</sup> 891  
Sambon 1911, no. 510  
Herzog 1937, no. 17  
*ILLRP* 1004



5: 5<sup>th</sup> October, 85 BCE

Current Location BM (1814,0704.1080); LH saw on display, but was granted no closer access

Findspot once in Venice, then Rome (*CIL* I<sup>2</sup> 892)

Material Ivory

Length 44 mm

Width No record

Height No record

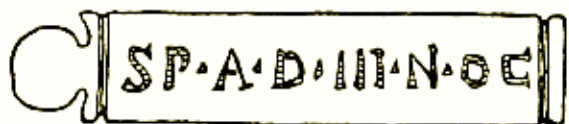
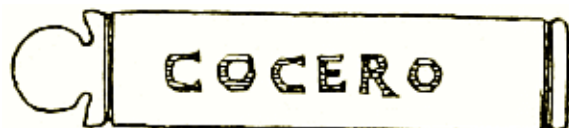
Perforation diameter No record

Text height No record

Photo © The Trustees of the British Museum (CC BY-NC-SA 4.0)



Drawing British Museum 1920, p. 69 Fig. 60



Text  
*COCERO*  
*FAFINI*  
*SP.A.D.III.N.OC*  
*L.CIN.CN.PA*

Bibliography  
*CIL* I 717=I<sup>2</sup> 892  
Garrucci 1877, no. 982  
Herzog 1937, no. 18  
*ILLRP* 1005

6: 4<sup>th</sup> March, 80 BCE

Last known location Munich in antiquarium (*ILLRP* 1006)  
Findspot once in Rome (Dodwellium, *CIL* I<sup>2</sup> 893)  
Material No record  
Length No record  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record  
Drawing Ritschl 1878b, Taf. XXII fig. A



Text *BATO*  
*ATTALENI*  
*SP·A·D·IV·N·MAR*  
*L·SUL·Q·MET*

Bibliography *CIL* I 718=I<sup>2</sup> 893  
Ritschl 1864, no. 2  
Herzog 1937, no. 19  
*ILLRP* 1006

7: Nones (7<sup>th</sup>) October, 77 BCE ?

Current Location BM (1772,0311.1); LH inspected in 2016

Findspot No record

Material Bone

Length 46 mm

Width 9 mm

Height 9 mm

Perforation diameter 2 mm

Text height No record

Photographs of second through fourth sides (working conditions at time of visit cut short efforts to secure sharper images)



Text

...  
[TARU]TILI  
SP [N]ON OCT

Bibliography

...  
*CIL* I<sup>2</sup> 943  
Herzog 1937, no. 20  
*ILLRP* 1007

8: 22<sup>nd</sup> February or 23<sup>rd</sup> April, 76 BCE

Current Location Fitzwilliam (no number); LH inspected in 2016

Findspot No record

Material Ivory

Length 35 mm (incomplete)

Width 9 mm

Height 6 mm

Perforation diameter N/A

Text height 2 mm



Text *DIPILVS*  
*CORNELI*  
*SP.A.D.IIX.K.M*  
*[C]N.OCT.C.CUR*

Bibliography Holman 2019, Fig. 2a-d

9: Ides (15<sup>th</sup>) July, 76 BCE  
 Current Location Fiesole; LH inspected in 2017  
 Findspot Faesulae Theater (*CIL* I<sup>2</sup> 894)  
 Material Ivory  
 Length 39 mm  
 Width 9 mm  
 Height 6 mm  
 Perforation diameter 2 mm  
 Text height 2-3 mm



Text *EUPOR*  
*MATRINI*  
*SP. ID. QUI*  
*CN. OCT. C. CUR*

Bibliography *CIL* I<sup>2</sup> 894  
 Herzog 1937, no. 21  
*ILLRP* 1008  
*Imagines* 342a-d

10: Kalends (1<sup>st</sup>) September, 76 BCE

Current Location BM (1772,0311.4); LH inspected in 2016

Findspot Rome

Material Ivory

Length 40 mm

Width 8 mm

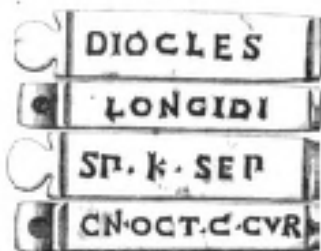
Height 5.5 mm

Perforation diameter 2 mm

Text height 3 mm



Drawing Ritschl 1878b, Taf. XX fig. B



Text  
*DIOCLES*  
*LONGIDI*  
*SP. K. SEP*  
*CN. OCT. C. CUR*

Bibliography *CIL* I 719=I<sup>2</sup> 895  
Herzog 1937, no. 22  
*ILLRP* 1009

11: 23<sup>rd</sup> October, 73 BCE

Last known location Rome (Orsini, *ILLRP* 1010)

Findspot once in Rome (F. Orsini, *ILLRP* 1010)

Material No record

Length No record

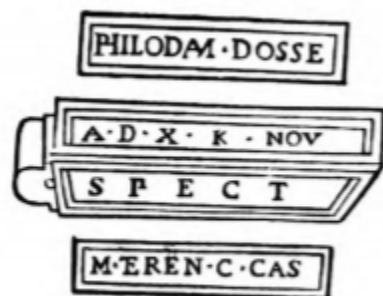
Width No record

Height No record

Perforation diameter No record

Text height No record

Drawing Ritschl 1878b, Taf. XX fig. C



*Sad.*

Text *PHILODAM.DOSSE*  
*A.D.X.K.NOV*  
*SPECT*  
*M.TEREN.C.CAS*

Bibliography *CIL* I 776a (suspect)=I<sup>2</sup> 896  
Herzog 1937, no. 23  
*ILLRP* 1010



12: 27<sup>th</sup> July, 72 BCE

Current Location BM (1891,0514.1); LH inspected in 2016

Findspot purchased in Agrigentum (*CIL* I<sup>2</sup> 897)

Material Ivory

Length 43 mm

Width 9 mm

Height 6 mm

Perforation diameter 2 mm

Text height 3 mm



Text *TEUPILUS*  
*MUNATI*  
*SP.A.D.VI.K.SEX*  
*L.GEL.CN.LEN*

Bibliography *CIL* I<sup>2</sup> 897  
Herzog 1937, no. 24  
*ILLRP* 1011



13: 8<sup>th</sup> January, 71 BCE

Current location Louvre (MND 2280/ED4638); LH inspected in 2016

Findspot No record

Material Ivory

Length 44 mm

Width 10 mm

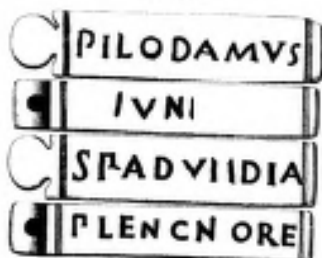
Height 7 mm

Perforation diameter 2 mm

Text height 3 mm



Drawing Ritschl 1878b, Taf. XX fig. D



Text *PILODAMVS*  
*IUNI*  
*SP.A.D.VI.ID.IA*  
*P.LEN.CN.ORE*

Bibliography *CIL* I<sup>2</sup> 898  
Herzog 1937, no. 25  
*ILLRP* 1012

14: Kalends (1<sup>st</sup>) April, 71 BCE

Last known location Capua (Pasqualios, *CIL* I<sup>2</sup> 899)

Findspot Capua in the amphitheater (*CIL* X 8070, 3)

Material Bone (*CIL* X 8070, 3)

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text  
*FLAC.NOVI*  
*K.APR*  
*SPECT*  
*P.LEN.CN.AUFID*

Bibliography  
*CIL* X 8070, 3=I<sup>2</sup> 899  
Herzog 1937, no. 26  
*ILLRP* 1013

15: 4<sup>th</sup> August, 71 BCE

Last known location Rome (Fr. Vettori, *CIL* I<sup>2</sup> 900)

Findspot No record

Material No record

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text *PILOTIMUS*  
*HOSTILI*  
*SP.PR.N.SEX*  
*P.LEN.CN.ORE*

Bibliography *CIL* I 720=I<sup>2</sup> 900  
Herzog 1937, no. 28  
*ILLRP* 1014

16: 16<sup>th</sup> April, 71 BCE

Current location PP (Dutuit 230); LH inspected in 2016

Findspot Rome?

Material Bone? with traces of *minium*

Length 41 mm

Width 10 mm

Height 5 mm

Perforation diameter 2 mm

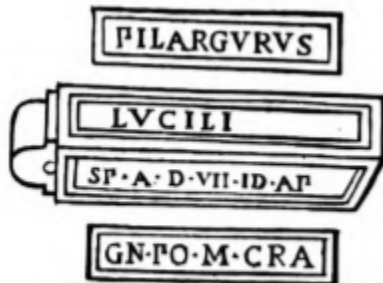
Text height 3 mm (XV underneath the main text on the third side are 2 mm tall)



Text *HYMNVS*  
*LUCRETI*  
*SP.A.D.XV.K.MAI*  
*P.LENT.CN.HOR*

Bibliography Herzog 1937, no. 27  
*CIL* I<sup>2</sup> 2718  
*ILLRP* 1015

17: 7<sup>th</sup> April, 70 or 55 BCE  
 Last known location Rome (Orsini, *CIL* I<sup>2</sup> 901)  
 Findspot Rome  
 Material No record  
 Length No record  
 Width No record  
 Height No record  
 Perforation diameter No record  
 Text height No record  
 Drawing Ritschl 1878b, Taf. XX fig. E



*Sad.*

Text *PILARGURUS*  
*LUCILI*  
*SP.A.D.VII.ID.AP*  
*CN.PO.M.CRA*

Bibliography *CIL* I 721=I<sup>2</sup> 901  
 Herzog 1937, no. 29  
*ILLRP* 1016

18: Kalends (1<sup>st</sup>) July, 70 or 55 BCE

Current location BM (1859,0301.50); LH inspected in 2016

Findspot once in Rome (*CIL* I<sup>2</sup> 903)

Material Ivory?

Length 44 mm

Width 8 mm

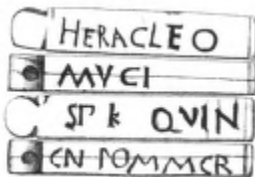
Height 6 mm

Perforation diameter 2 mm

Text height 4 mm



Drawing Ritschl 1878b, Taf. XX fig. G



Text *HERACLEO*  
*MUCI*  
*SP K QUIN*  
*CN.POM.M.CR*

Bibliography *CIL* I 723=I<sup>2</sup> 903  
Herzog 1937, no. 31  
*ILLRP* 1017

19: Kalends (1<sup>st</sup>) July, 70 or 55 BCE

Current Location BM (1859,0301.51); LH saw on display, but was granted no closer access

Findspot once in Rome (*CIL* I<sup>2</sup> 902)

Material Ivory

Length 44 mm

Width No record

Height No record

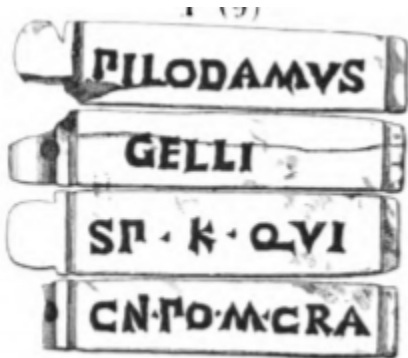
Perforation diameter No record

Text height No record

Photo (third side) © The Trustees of the British Museum (CC BY-NC-SA 4.0)



Drawing Ritschl 1878b, Taf. XX fig. F



Text *PILODAMUS*  
*GELLI*  
*SP.K.QUI*  
*CN.PO.M.CRA*

Bibliography *CIL* I 722=I<sup>2</sup> 902  
Herzog 1937, no. 30  
*ILLRP* 1018

20: 26<sup>th</sup> March, 69 BCE

Current Location BNF (3247); LH inspected in 2017

Findspot No record

Material Ivory

Length 46 mm

Width 9 mm

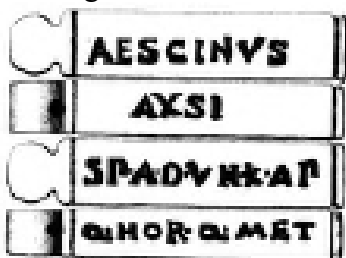
Height 7 mm

Perforation diameter 2 mm

Text height 3 mm



Drawing Ritschl 1878b, Taf. XXII fig. C



Text *AESCINUS*  
*AXSI*  
*SP.A.D.VII.K.AP*  
*Q.HOR.Q.MET*

Bibliography *CIL* I 724=I<sup>2</sup> 904  
Herzog 1937, no. 32  
*ILLRP* 1019



21: 10<sup>th</sup> January, 68 BCE

Current Location BNF (Froehner 4); LH inspected in 2017

Findspot once in Rome (*CIL* I<sup>2</sup> 905)

Material Ivory

Length 44 mm

Width 8 mm

Height 7 mm

Perforation diameter 2 mm

Text height 2 mm



Text *EPAGATUS*  
*GAVI*  
*SP.A.D.IV.ID.IAN*  
*Q.REG.L.MET*

Bibliography *CIL* I<sup>2</sup> 905  
Herzog 1937, no. 33  
*ILLRP* 1020

22: Kalends (1<sup>st</sup>) September, 64 BCE

Current Location BNF (Froehner 6); LH inspected in 2017

Findspot Rome, Esquiline Hill (*CIL* I<sup>2</sup> 906)

Material Ivory

Length 42 mm

Width 7 mm

Height 7 mm

Perforation diameter 2 mm

Text height 3 mm



Text *GALLIO*  
*PEDICAE*  
*SP.K.SEP*  
*L.IUL.C.FIG*

Bibliography *CIL* I<sup>2</sup> 906  
Herzog 1937, no. 34  
*ILLRP* 1021

23: Kalends (1<sup>st</sup>) January, 63 BCE

Current Location BNF (Froehner 7); LH inspected in 2017

Findspot Rome (*CIL* I<sup>2</sup> 907)

Material Ivory

Length 50 mm

Width 7 mm

Height 6 mm

Perforation diameter 2 mm

Text height 3-5 mm



Text *PHILARGURUS*  
*EPILLI*  
*SP. K. IAN*  
*M. TUL. C. ANT*

Bibliography *CIL* I<sup>2</sup> 907  
Babelon 1928, pl. II no. 19  
Herzog 1937, no. 35  
*ILLRP* 1022

24: February, 63 BCE

Current Location Presumed lost (*ILLRP* 1023)

Findspot Arelate (*CIL* I<sup>2</sup> 908)

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text  
*ANCHIAL.SIRTIL.L.S*  
*SPECTAT.NUM*  
*MENSE.FEBR*  
*M.TUL.C.ANT.COS*

Bibliography  
*CIL* I<sup>2</sup> 908  
Herzog 1937, no. 36  
*ILLRP* 1023

25: 19<sup>th</sup> July, 63 BCE

Current Location Fitzwilliam (Ant.Loan.103.143); LH inspected in 2018  
Findspot once in Rome (Castellani, *CIL* I<sup>2</sup> 909)  
Material Ivory  
Length 47 mm  
Width 7.5 mm  
Height 5.5 mm  
Perforation diameter 2 mm  
Text height 3-4 mm



Text Blank  
Blank  
*SP.A.D.XIV.K.SEX*  
*M.TUL.C.ANT*

Bibliography *CIL* I<sup>2</sup> 909  
Herzog 1937, no. 37  
*ILLRP* 1024  
Holman 2019, Fig. 1a-d

26: Kalends (1 <sup>st</sup> ) February, 62 BCE	
Last known location	Rome? (Castellani, <i>ILLRP</i> 1025)
Findspot	No record
Material	Ivory
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record
Text	<i>HERACLIDA</i> <i>LOLLI</i> <i>SP.K.FEB</i> <i>D.SIL.L.MUR</i>
Bibliography	Castellani 1884, no. 233 <i>CIL</i> I <sup>2</sup> 910 Herzog 1937, no. 38 <i>ILLRP</i> 1025



27: Kalends (1<sup>st</sup>) April, 62 BCE

Current Location BNF (Froehner 8); LH inspected in 2017

Findspot found in Rome (*CIL* I<sup>2</sup> 911)

Material Ivory stained brown

Length 47 mm

Width 9 mm

Height 6 mm

Perforation diameter 3 mm

Text height 3-4 mm



Text *FLACCUS*  
*RABIRI*  
*SP.K.APR*  
*D.SIL.L.MUR*

Bibliography *CIL* I<sup>2</sup> 911  
Babelon 1928, pl. II no. 15  
Herzog 1937, no. 39  
*ILLRP* 1026

28: 10<sup>th</sup> July, 62 BCE

Current Location: BNF (Froehner 5); LH inspected in 2017  
Findspot acquired in Rome (1920, Froehner vol. 11, p. 609)  
Material Ivory  
Length 52 mm  
Width 10 mm  
Height 9 mm  
Perforation diameter 2 mm  
Text height 3-4 mm



Text *EUNUS*  
*FIDICLANI.C.S.*  
*SP.A.D.VI.ID.QVI*  
*D.SIL.L.MUR*

Bibliography Babelon 1928, pl. II no. 7  
*CIL* I<sup>2</sup> 2663b  
Herzog 1937, no. 39  
*ILLRP* 1027



29: Ides (15<sup>th</sup>) May, 61 BCE

Current Location Palazzo Massimo (65141); LH inspected in 2017

Findspot near Rome (*CIL* I<sup>2</sup> 912)

Material Ivory

Length 50 mm

Width 9 mm

Height 6 mm

Perforation diameter 3 mm

Text height 3 mm



Text *ANTIOCVS*  
*MAGULNI*  
*SP.ID.MAI*  
*M.PIS.M.MES*

Bibliography *CIL* I 725=I<sup>2</sup> 912  
Herzog 1937, no. 41  
*ILLRP* 1028

30: 17<sup>th</sup> July, 61 BCE

Current Location BNF (Froehner 9); LH inspected in 2017

Findspot Rome (*CIL* I<sup>2</sup> 913)

Material Ivory stained brown

Length 52 mm

Width 9 mm

Height 7 mm

Perforation diameter 2 mm

Text height 3-4 mm



Text *SALVI*  
*PERSI*  
*SP.A.D.XVI.K.SEX*  
*M.PIS.M.MES*

Bibliography *CIL* I<sup>2</sup> 913  
Herzog 1937, no. 42  
*ILLRP* 1029

31: July, 61 or 53 BCE

Last known location Rome?

Findspot Nomentum (*CIL* XIV 3988)

Material Ivory (Pettirossi 2016, 18; EDR130645)

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text ...*GURUS*

...*LANI*

...*QUI*

...*M.VA*

Bibliography *CIL* XIV 3988=I<sup>2</sup> 914

Herzog 1937, no. 43

*ILLRP* 1030

Pettirossi 2016, 18-19

32: 27<sup>th</sup> January, 60 BCE

Current Location BNF (Froehner 10); LH inspected in 2017

Findspot Rome (*CIL* I<sup>2</sup> 915)

Material Ivory

Length 50 mm

Width 10 mm

Height 7 mm

Perforation diameter 2 mm

Text height 3 mm



Text *AMPHIO*  
*INSTUMENNI*  
*SP.A.D.IV.K.FEB*  
*L.AFR.Q.MET*

Bibliography *CIL* I<sup>2</sup> 915  
Babelon 1928, pl. II no. 4  
Herzog 1937, no. 44  
*ILLRP* 1031  
*Imagines* no. 346

33: 25<sup>th</sup> March, 60 BCE

Last known location Private collection (Pedroni 1995)

Findspot No record

Material Bone

Length 51 mm

Width 11 mm

Height 9 mm

Perforation diameter 1.5 mm

Text height 4.5-5 mm tall

Photographs Pedroni 1995, fig. 1-4a



Text *PHILARGURUS*  
*FULVI*  
*SP.A.D.IIX.K.APR*  
*L.AFR.Q.MET*

Bibliography Pedroni 1995, fig. 1-4a  
*AE* 1995.1814

34: Kalends (1<sup>st</sup>) April, 60 BCE

Current Location Florence (1530); LH inspected in 2017

Findspot once in Rome (*CIL* I<sup>2</sup> 916)

Material Bone?

Length 47 mm

Width 9 mm

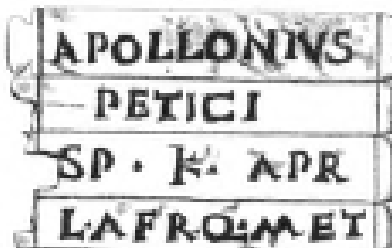
Height 7 mm

Perforation diameter 2 mm

Text height 3 mm



Drawing Ritschl 1878b, Taf. XXII fig. D



Text *APOLLONIUS*  
*PETICI*  
*SP. K. APR*  
*L. AFR. Q. MET*

Bibliography *CIL* I 727=I<sup>2</sup> 916  
Herzog 1937, no. 45  
*ILLRP* 1032



35: Ides (13<sup>th</sup>) August, 60 BCE

Current Location Verona (34984); LH inspected in 2017

Findspot Verona ?

Material Ivory

Length 50 mm

Width 10 mm

Height 8 mm

Perforation diameter 2 mm

Text height 3-4 mm



Text *RUFIO*  
*SERTORI*  
*SP.ID.SEX*  
*L.AFR.Q.MET*

Bibliography *CIL* I 728=I<sup>2</sup> 917  
Herzog 1937, no. 46  
*ILLRP* 1033

36: 24<sup>th</sup> March, 59 BCE

Current Location Musei Vaticani (66227); LH inspected in 2017

Findspot No record

Material Ivory

Length 45 mm

Width 7 mm

Height 8 mm

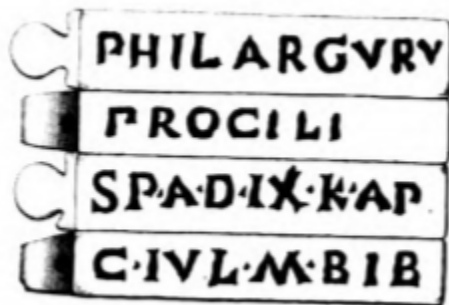
Perforation diameter 2 mm

Text height 3-4 mm

Photo Musei Vaticani



Drawing Ritschl 1878b, Taf. XX fig. H



Text  
*PHILARGURU*  
*PROCILI*  
*SP.A.D.IX.K.AP*  
*C.IUL.M.BIB*

Bibliography  
*CIL* I 729=I<sup>2</sup> 918  
Herzog 1937, no. 47  
*ILLRP* 1034



37: Ides (13<sup>th</sup>) April, 59 BCE

Current Location Fitzwilliam (Ant.Loan.103.144); LH inspected in 2016

Findspot No record

Material Ivory

Length 45 mm

Width 8 mm

Height 7 mm

Perforation diameter 3 mm

Text height No record



Text  
*SALVI*  
*LICINI*  
*SP.ID.APR*  
*C.IUL.M.BIB*

Bibliography  
Bicknell 1927, n. 8  
Calabria and Di Jorio 2018, Tab 1.44  
Holman 2019, Fig. 3a-d

38: 14<sup>th</sup> July, 58 BCE

Current Location	Presumed lost ( <i>ILLRP</i> 1035)
Findspot	once in Rome (Franc. Godofredum, <i>CIL</i> I <sup>2</sup> 919)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>ELEUTHERUS</i> <i>TAMUDI</i> <i>SP.PR.ID.QUI</i> <i>L.PIS.A.GAB</i>
------	---

Bibliography	<i>CIL</i> I 730=I <sup>2</sup> 919 Herzog 1937, no. 48 <i>ILLRP</i> 1035
--------------	---

39: 58 BCE

Last known location	No record
Findspot	Rome near Augustus' mausoleum ( <i>CIL</i> I <sup>2</sup> 920)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	...
	...
	...
	<i>L.PIS.A.GAB</i>

Bibliography	<i>CIL</i> I <sup>2</sup> 920
	Herzog 1937, no. 49
	<i>ILLRP</i> 1036

40: Ides (13<sup>th</sup>) August, 58 BCE

Current Location Milan? (Lambrugo et. al. 2015, Parte II)

Findspot No record

Material Ivory

Length 47 mm

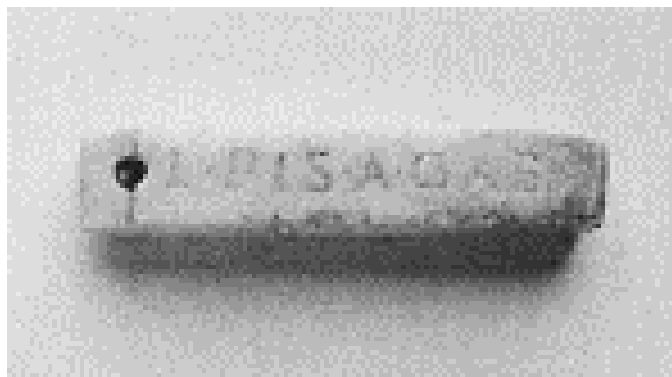
Width No record

Height No record

Perforation diameter No record

Text height No record

Photo of fourth side Valentino Albini 2015, Parte II



Text  
*MALCHIO*  
*FUNDILI*  
*SP.ID.SEX*  
*L.PIS.A.GAB*

Bibliography Sambon 1911, no. 509  
Lambrugo 2015, Parte II

41: 25<sup>th</sup> March, 57 BCE

Current Location PP (Dutuit 225); LH inspected in 2016

Findspot Rome, Aventine Hill (*CIL* I<sup>2</sup> 921)

Material Ivory with traces of *minium*

Length 40 mm

Width 9 mm

Height 6 mm

Perforation diameter N/A

Text height 3-3.5 mm



Text  
*STEPANUS*  
*MAMMI*  
*SP.A.D.IIX.K.AP*  
*P.LEN.Q.MET*

Bibliography  
*CIL* I<sup>2</sup> 921  
Herzog 1937, no. 50  
*ILLRP* 1037

42: Kalends (1<sup>st</sup>)? September, 57 BCE

Current Location BNF (Froehner 14); LH inspected in 2017

Findspot Rome (*CIL* I<sup>2</sup> 922)

Material Bone?

Length 24 mm

Width 8 mm

Height 6 mm

Perforation diameter N/A

Text height 3 mm



Text  
...[M]EDES  
...ODI  
...[K].SEP  
...Q.MET

Bibliography  
*CIL* I<sup>2</sup> 922  
Herzog 1937, no. 51  
*ILLRP* 1038

43: 21<sup>st</sup> January, 56 BCE

Current Location BNF (Froehner 11); LH inspected in 2017

Findspot Rome (*CIL* I<sup>2</sup> 923)

Material Ivory?

Length 50 mm

Width 9 mm

Height 7 mm

Perforation diameter 2 mm

Text height 3 mm



Text *FAUSTVS*  
*MANLI*  
*SP.A.D.X.K.FEB*  
*CN.COR.L.MAR*

Bibliography *CIL* I<sup>2</sup> 923  
Babelon 1928, pl. II no. 17  
Herzog 1937, no. 52  
*ILLRP* 1039

44: 24<sup>th</sup> February, 56 BCE

Last known location Montevarchi (Cini, *CIL* I<sup>2</sup> 924)

Findspot Faesulae (*CIL* I<sup>2</sup> 924)

Material Bone (*ILLRP* 1040)

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text  
*CHILO*  
*MURRI*  
*SP.A.D.VI.K.MAR*  
*CN.COR.L.MAR*

Bibliography  
*CIL* I<sup>2</sup> 924  
Herzog 1937 no. 53  
*ILLRP* 1040



45: Ides (15<sup>th</sup>) July, 56 BCE

Current Location PP (Dutuit 226); LH inspected in 2016

Findspot once in Rome (*CIL* I<sup>2</sup> 925)

Material Ivory with traces of *minium*

Length 51 mm

Width 8 mm

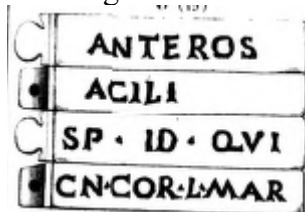
Height 7 mm

Perforation diameter 3 mm

Text height 3-4 mm



Drawing Ritschl 1878b, Taf. XX fig. J



Text  
*ANTEROS*  
*ACILI*  
*SP.ID.QVI*  
*CN.COR.L.MAR*

Bibliography  
*CIL* I<sup>2</sup> 925  
Herzog 1937, no. 54  
*ILLRP* 1041

46: July, 56 BCE

Last known location	No record
Findspot	Tannetum, found outside the villa of S. Hilarus ( <i>CIL</i> XI 1021)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>PELOPS</i> <i>PETILI</i> <i>SP.ME.QUI</i> <i>CN.LE.L.PHIL.COS</i>
------	---

Bibliography	<i>CIL</i> XI 1021=I <sup>2</sup> 926 Herzog 1937, no. 55 <i>ILLRP</i> 1042
--------------	---

47: Kalends (1<sup>st</sup>) Intercalary month, 55 BCE

Current Location Terme (65141); LH inspected in 2017  
Findspot Rome, Temple of Magna Mater (Pensabene 1987, p.69-76)  
Material Ivory  
Length 31 mm  
Width 8 mm  
Height 7 mm  
Perforation diameter 2 mm  
Text height 3-5 mm



Text *RUFIO*  
*VEVEI*  
*SP.K.INT*  
*CN.PO.M.LI.II*

Bibliography Pensabene 1987, p.69-76  
*AE* 1992.177

48: Kalends (1<sup>st</sup>) January, 54 BCE

Current Location BNF (Froehner 13); LH inspected in 2017

Findspot once in Rome (*ILLRP* 1043)

Material Ivory

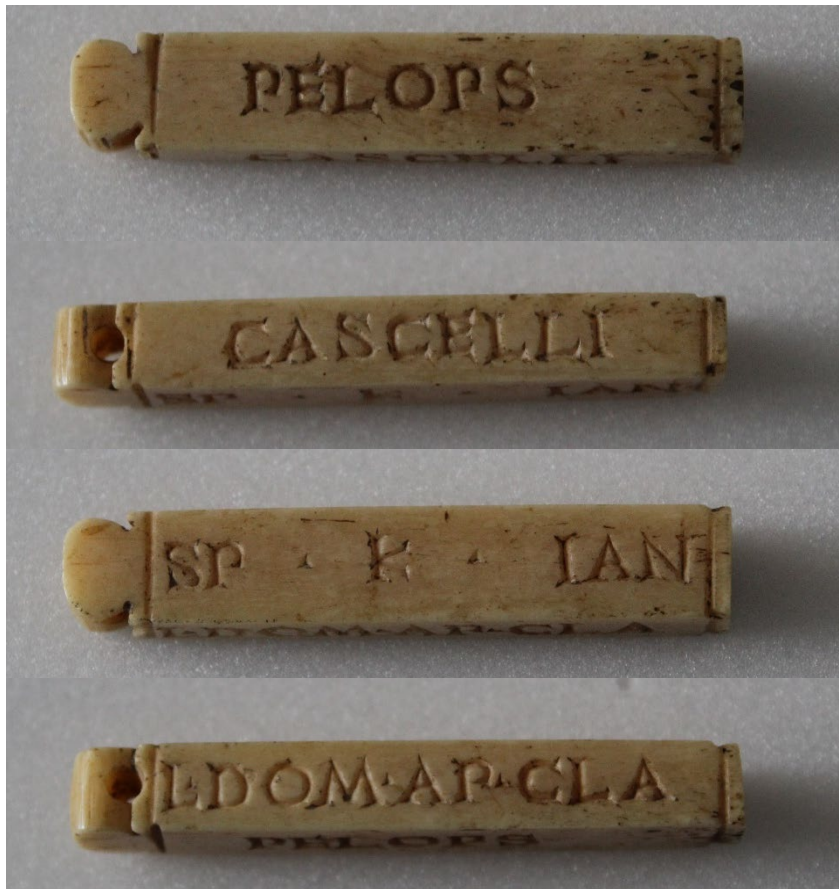
Length 49 mm

Width 9 mm

Height 6 mm

Perforation diameter 2 mm

Text height 3 mm



Text  
*PELOPS*  
*CASCELLI*  
*SP.K.IAN*  
*L.DOM.AP.CLA*

Bibliography  
*CIL* I<sup>2</sup> 927  
Herzog 1937, no. 56  
*ILLRP* 1043

49: 26<sup>th</sup> March, 54 BCE

Current Location BNF (Froehner 12); LH inspected in 2017  
Findspot once in Rome (*CIL* I<sup>2</sup> 928)  
Material Bone?  
Length 52 mm  
Width 8 mm  
Height 6 mm  
Perforation diameter 2 mm  
Text height 3 mm



Text *PROTUS*  
*PETILLI*  
*SP.A.D.VII.K.AP*  
*L.DOM.AP.CLA*

Bibliography *CIL* I<sup>2</sup> 928  
Babelon 1928, pl. II no. 24  
Herzog 1937, no. 57  
*ILLRP* 1044



50: 24<sup>th</sup> September, 54 BCE

Current Location Florence (1531); LH inspected in 2017

Findspot Florentia

Material Ivory

Length 26 mm

Width 7 mm

Height 6 mm

Perforation diameter 2 mm

Text height 2-3 mm



Drawing Ritschl 1878b, Taf. XXII fig. E



Text *TEOPROPY*  
*FABI*  
*SP.A.D.VII.K.OC*  
*L.DOM.AP.*

Bibliography *CIL* I 732=I<sup>2</sup> 929  
Herzog 1937, no. 58  
*ILLRP* 1045

51: Ides (13<sup>th</sup>) June, 53 BCE

Current Location BNF (Froehner 15); LH inspected in 2017  
Findspot purchased in Rome (Babelon 1928, no. 16)  
Material Ivory stained brown  
Length 45 mm  
Width 10 mm  
Height 6 mm  
Perforation diameter 3 mm  
Text height 3 mm



Text *C. OCTAVIUS*  
Blank  
*SP. ID. IUN*  
*Q. MET. INT*

Bibliography Babelon 1928, pl. II no. 18  
*CIL* I<sup>2</sup> 2663c  
Herzog 1937, no. 61  
*ILLRP* 1046

52: 28<sup>th</sup> January, 53 BCE

Last known location	No record
Findspot	purchased in Rome (Heinsius, <i>CIL</i> I 733)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>PILODAMUS</i> <i>IULI</i> <i>SP.A.D.III.K.FEB</i> <i>M.VAL.CN.DO</i>
------	--

Bibliography	<i>CIL</i> I 733=I <sup>2</sup> 930 Herzog 1937, no. 60 <i>ILLRP</i> 1047
--------------	---



53: 9<sup>th</sup> January, 53 BCE ?

Current Location BM (1772,0311.10); LH inspected in 2016

Findspot No record

Material Ivory

Length 40 mm

Width 8 mm

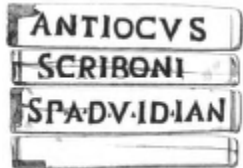
Height 7 mm

Perforation diameter N/A

Text height 4 mm



Drawing Ritschl 1878b, Taf. XX fig. K



Text  
*ANTIOCVS*  
*SCRIBONI*  
*SP·A·D·V·ID·IAN*  
Blank

Bibliography *CIL* I 775=I<sup>2</sup> 944  
Herzog 1937, no. 69  
*ILLRP* 1048

54: Kalends (1<sup>st</sup>) April, 52 BCE

Last known location No record

Findspot reportedly found in Rome (Andreau 2001, 334-335)

Material Ivory

Length 30.2 mm

Width 9 mm

Height 6 mm

Perforation diameter No record

Text height No record

Text *FAUSTUS*  
*HETRILI*  
*SP.K.APR*  
*CN.POM.COS.III*

Bibliography Andreau 2001, 334-336

55: 29<sup>th</sup> April, 52 BCE

Current Location BNF (Froehner 16); LH inspected in 2017

Findspot Rome (*CIL* I<sup>2</sup> 931)

Material Ivory stained brown

Length 48 mm

Width 9 mm

Height 7 mm

Perforation diameter 3 mm

Text height 3 mm



Text *PHILARGURUS*  
*ACONI*  
*SP.PR.K.MAI*  
*CN.POM.COS.TER*

Bibliography *CIL* I<sup>2</sup> 931  
Herzog 1937, no. 62  
*ILLRP* 1049

56: Ides (13<sup>th</sup>) June, 52 BCE

Last known location Rome, Villa Pamphili (Belli, *ILLRP* 1050)

Findspot Rome, Villa Pamphili (*CIL* I 734)

Material No record

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text *PHILEMO*  
*CAECILI*  
*SP.ID.IUN*  
*CN.POMP.COS.III*

Bibliography *CIL* I 734=I<sup>2</sup> 932  
Herzog 1937, no. 63  
*ILLRP* 1050

57: Ides (13<sup>th</sup>) September, 52 BCE

Last known location	No record
Findspot	Rome, Esquiline Hill ( <i>CIL</i> I <sup>2</sup> 933)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>PHILONICUS</i> <i>ALBANI</i> <i>SP.ID.SEP</i> <i>CN.POM.Q.ME</i>
------	--

Bibliography	<i>CIL</i> I <sup>2</sup> 933 Herzog 1937, no. 64 <i>ILLRP</i> 1051
--------------	---

58: Ides (13<sup>th</sup>) January, 51 BCE

Current Location BNF (Froehner 17); LH inspected in 2017

Findspot Rome (*CIL* I<sup>2</sup> 934)

Material Ivory stained brown

Length 48 mm

Width 8 mm

Height 6 mm

Perforation diameter 2 mm

Text height 3 mm



Text *AMPHIO*  
*LURI*  
*SP.ID.IAN*  
*SER.SUL.M.CLA*

Bibliography *CIL* I<sup>2</sup> 934  
Herzog 1937, no. 65  
*ILLRP* 1052

59: Kalends (1<sup>st</sup>) January, 50 BCE

Current Location	Presumed lost ( <i>ILLRP</i> 1053)
Findspot	Rome, under monte della Giustizia ( <i>CIL</i> I <sup>2</sup> 935)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>STABILIO</i> <i>VOLCACI</i> <i>SP.K.IAN</i> <i>L.AEM.C.CLA</i>
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Bibliography	<i>CIL</i> I <sup>2</sup> 935 Herzog 1937, no. 66 <i>ILLRP</i> 1053
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60: Kalends (1<sup>st</sup>) October, 50 BCE

Current Location BNF (Froehner 18); LH inspected in 2017

Findspot Rome (*CIL* I<sup>2</sup> 936)

Material Ivory

Length 52 mm

Width 8 mm

Height 7 mm

Perforation diameter 2 mm

Text height 3 mm



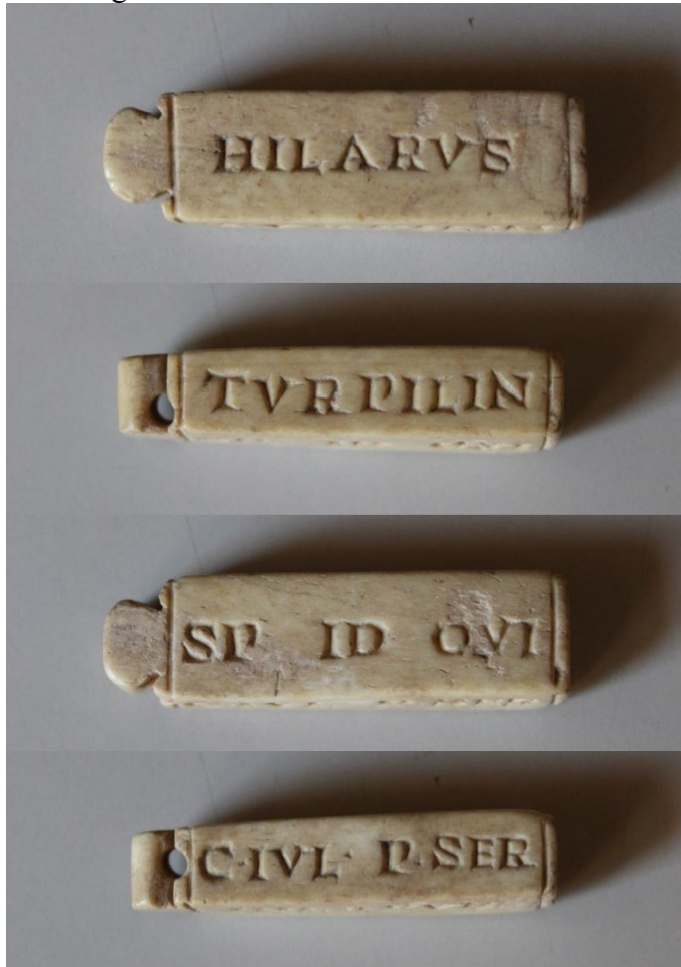
Text  
*EROS*  
*MANLI*  
*SP. K. OCT*  
*L. PAUL. C. CLA*

Bibliography  
*CIL* I<sup>2</sup> 936  
Herzog 1937, no. 67  
*ILLRP* 1054



61: Ides (15<sup>th</sup>) July, 48 BCE

Current Location Naples (119386); LH inspected in 2017  
Findspot Pompeii, reg. IX ins. VI n. 5 (*CIL* X 8069,1)  
Material Ivory?  
Length 38 mm  
Width 10 mm  
Height 8 mm  
Perforation diameter 3 mm  
Text height 3 mm



Text *HILARUS*  
*TURPILIN*  
*SP ID QUI*  
*C.IUL.P.SER*

Bibliography *CIL* X 8069,1=I<sup>2</sup> 937  
Herzog 1937, no. 68  
*ILLRP* 1055

62: Kalends (1<sup>st</sup>) October, 48 BCE

Current Location BNF (Froehner 19); LH inspected in 2017

Findspot Rome (*CIL* I<sup>2</sup> 938)

Material Ivory stained brown

Length 34 mm

Width 10 mm

Height 11 mm

Perforation diameter 2 mm

Text height 3-4 mm



Text  
*SCURRA*  
*FULVI*  
*SP.K.OCT*  
*C.IUL.P.SER*

Bibliography  
*CIL* I<sup>2</sup> 938  
Babelon 1928, pl. II no. 11  
Herzog 1937, no. 69  
*ILLRP* 1056

63: 16<sup>th</sup> November, 47 BCE

Last known location Museum in Aix-en-Provence (*ILLRP* 1057)

Findspot Rome (*CIL* I<sup>2</sup> 939)

Material Bone (Gibert 1862, p. 114 no. 514)

Length 45 mm (Gibert 1882, no. 168)

Width 9 mm

Height 6 mm

Perforation diameter No record

Text height No record

Text *HERMIA*

Blank

*SP.A.D.XV.K.DEC*

*Q.FUF.P.VAT*

Bibliography *CIL* I 735=I<sup>2</sup> 939

Gibert 1862, no. 514

Gibert 1882, p. 125-126 no. 168

Herzog 1937, no. 70

*ILLRP* 1057

64: Kalends (1<sup>st</sup>) February, 46 BCE

Last known location No record

Findspot Rome (Franc. Gothofredum, *CIL* I<sup>2</sup> 940)

Material No record

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text *PAMPHILUS*  
*SERVILI.M.S*  
*SPE.K.FEB*  
*C.CAES.M.LEP*

Bibliography *CIL* I 736=I<sup>2</sup> 940  
Herzog 1937, no. 71  
*ILLRP* 1058

65: Ides (13<sup>th</sup>) Intercalary month, 46 BCE

Last known location Antiquarium on the Caelian Hill (ILLRP 1059)

Findspot purchased in Rome (ILLRP 1059)

Material Ivory

Length 36 mm

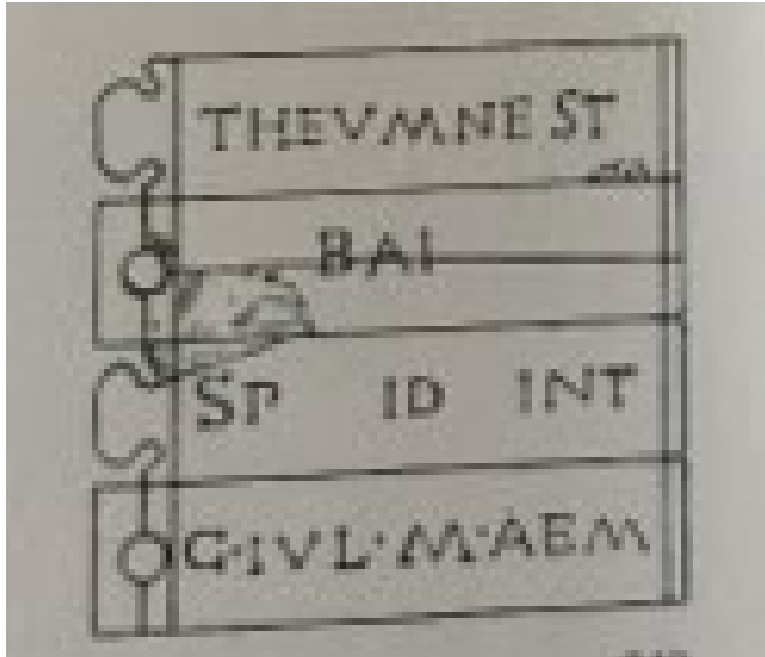
Width 8 mm

Height 8 mm

Perforation diameter No record

Text height No record

Drawing Pietrangeli 1940, p. 200 no. 1



Text  
*THEUMNEST*  
*BAI*  
*SP ID INT*  
*C.IUL.M.AEM*

Bibliography  
Pietrangeli 1940, p. 200 no. 1  
*ILLRP 1059*

66: Ides (13<sup>th</sup>) November, 46 BCE

Last known location Paris (Chavret, *CIL* I<sup>2</sup> 941; copy=BM 1772,0311.48)

Findspot once in Rome (Orsini, *ILLRP* 1060)

Material No record

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text

*RUFIO*

*PETILLI*

*SP.ID.NOV*

*C.IUL.M.AEM*

Bibliography

*CIL* I 737=I<sup>2</sup> 941

Herzog 1937, no. 72

*ILLRP* 1060

67: Ides (13<sup>th</sup>) August, 44 BCE

Current Location Louvre (ED4644); LH inspected in 2016

Findspot No record

Material Ivory

Length 36 mm

Width 10 mm

Height 9 mm

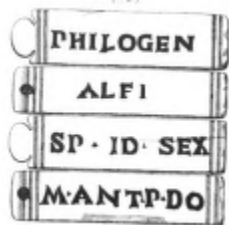
Perforation diameter 2 mm

Text height 3 mm



Drawing

Ritschl 1878b, Taf. XX fig. M



Text

*PHILOGEN*  
*ALFI*  
*SP · ID · SEX*  
*M · ANT · P · DO*

Bibliography

*CIL* I 738=I<sup>2</sup> 942  
Herzog 1937, no. 73  
*ILLRP* 1061

68: Ides (15<sup>th</sup>) May, 42 BCE

Last known location Antiquarium on the Caelian Hill (*ILLRP* 1059)

Findspot purchased in Rome (*ILLRP* 1059)

Material Ivory

Length 38 mm

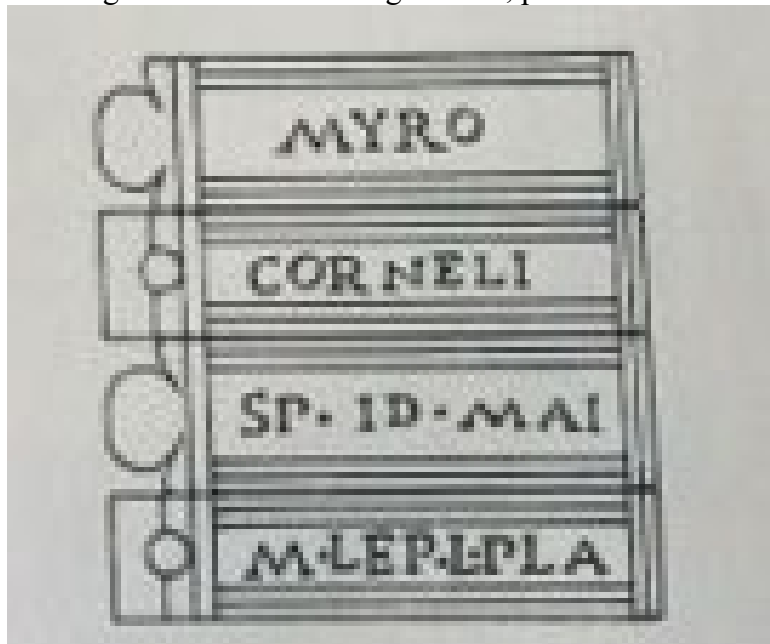
Width 10 mm

Height 8 mm

Perforation diameter No record

Text height No record

Drawing Pietrangeli 1940, p. 200 no. 2



Text  
*MYRO*  
*CORNELI*  
*SP.ID.MAI*  
*M.LEP.L.PLA*

Bibliography  
Pietrangeli 1940, p. 200 no. 2  
*ILLRP* 1063



69: Kalends (1<sup>st</sup>) July, 42 BCE.

Last known location Manuscript located in Biblioteca Capitolare di Verona (Buonopane 2019a, p. 105)

Findspot Bianchi saw it in Rome in the collection of Francesco Ficoroni (Buonopane 2019a, 103-104)

Material No record

Length No record

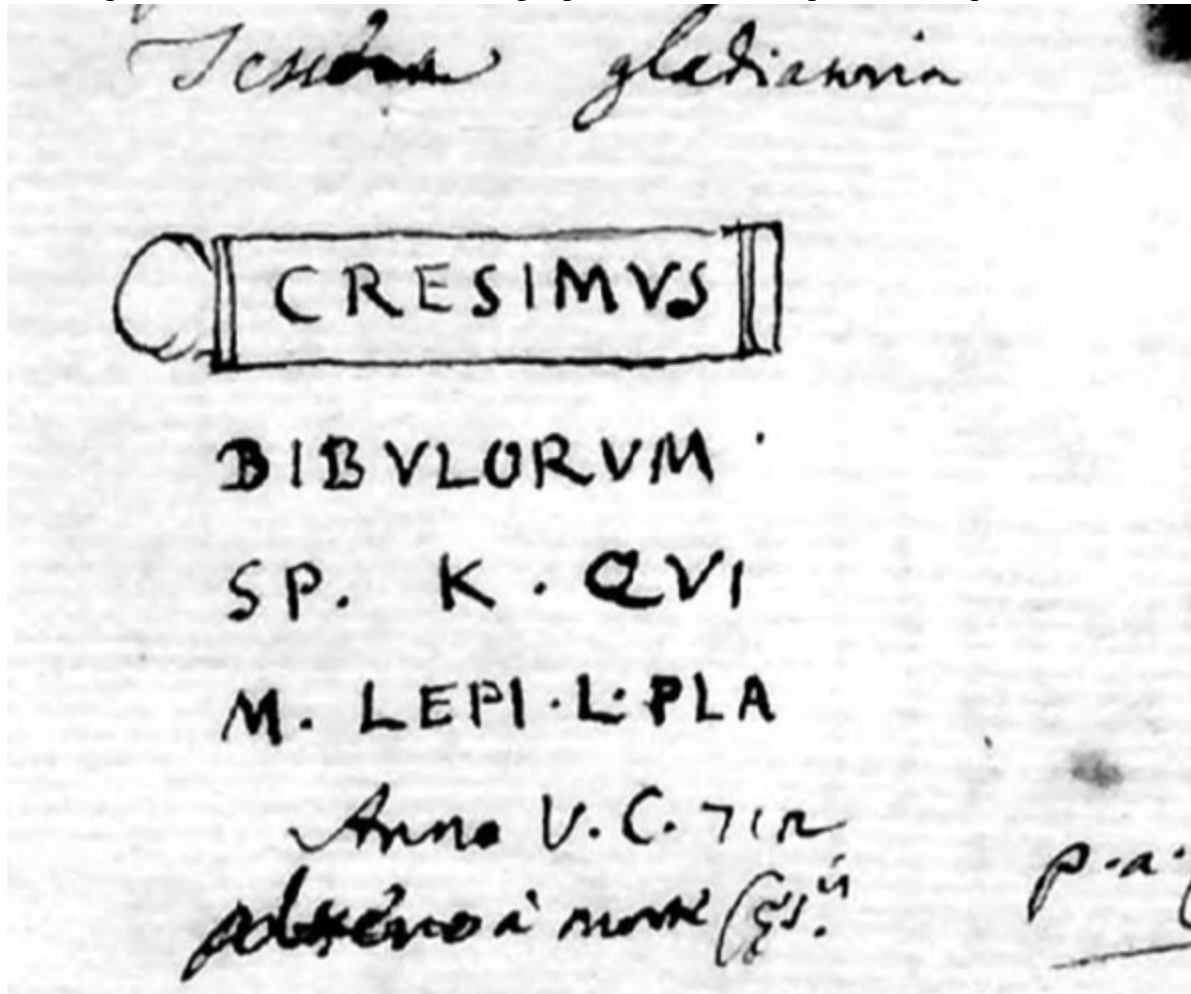
Width No record

Height No record

Perforation diameter No record

Text height No record

Drawing Bianchi's drawing reproduced in Buonopane 2019a, p. 106



Text *CHRESIMVS*  
*BIBULORVM*  
*SP. K. QUI*  
*M. LEPI. L. PLA*

Bibliography Buonopane 2019a, p. 103-107

70: Kalends (1<sup>st</sup>) September, 42 BCE

Last known location No record

Findspot No record

Material No record

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Drawing by Cassiano dal Pozzo in Vaiani 2016, tav. 144; Buonopane 2019b, p. 65

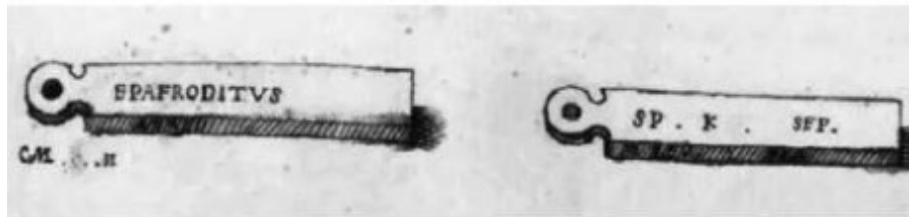


Figura 8 – Una *tessera nummularia* inedita nel disegno di Cassiano dal Pozzo. [Vaiani 2016, tav. 144]

Text *EPAFRODITVS*  
*ATREI*  
*SP.K.SEP.*  
*M.LEP.L.PLA*

Bibliography Vaiani 2016, p. 348, tav. 144  
Buonopane 2019b, p. 64-65

71: Kalends (1<sup>st</sup>) November, 33 BCE

Last known location	No record
Findspot	Rome (in 1818, <i>CIL</i> I 740)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>PLOCAMUS</i> <i>AUTRONI</i> <i>SP.K.NOV</i> <i>L.VIN.Q.LAR</i>
------	--

Bibliography	<i>CIL</i> I 740 Herzog 1937, no. 74 <i>ILLRP</i> 1063
--------------	--

72: 24<sup>th</sup> March, 27 BCE

Current Location BNF (Froehner 20); LH inspected in 2017

Findspot No record

Material Bone?

Length 37 mm

Width 13 mm

Height 6 mm

Perforation diameter N/A

Secondary perforation 5 mm

Text height 2-3 mm



Text [M]OSCHUS  
MANLI  
[SP].IX.K.APR  
IMP.C.VII.M.AGR.III

Bibliography Babelon 1928, no. 21  
Herzog 1937, no. 75

73: Kalends (1<sup>st</sup>) April, 26 BCE

Current Location BNF (Froehner 21); LH inspected in 2017

Findspot No record

Material Ivory?

Length 26 mm

Width 9 mm

Height 6 mm

Perforation diameter 2 mm

Text height 2 mm



Text *HILARIO*  
*ANNI*  
*SP. K. APR*  
*IMP. C. T. TAUR*

Bibliography Babelon 1928, no. 22  
Herzog 1937, no. 76

74: 30<sup>th</sup> October, 26 BCE

Current Location Vienna (ANSA\_III\_183); LH inspected in 2016

Findspot No record

Material Ivory?

Length 40 mm

Width 11 mm

Height 8 mm

Perforation diameter 2 mm

Text height 2 mm



Drawing

Ritschl 1878b, Taf. XX fig. O



Text

*HILARIO*  
*CAECILI*  
*SP. III. K. NOV*  
*IMP. C. VIII. T. TAU*

Bibliography

Herzog 1937, no. 77

75: Kalends (1<sup>st</sup>) January, 25 BCE ?

Current Location      Hannover (1667); LH inspected in 2017  
Findspot                once in Rome (Kestner, *CIL* I 739)  
Material                Ivory  
Length                 59 mm  
Width                  5 mm at left end, 6 mm at right end  
Height                 7 mm  
Perforation diameter 2 mm  
Text height            2 mm  
Photographs          Kestner Museum



Drawing                Ritschl 1878b, Taf. XX fig. N



Text                    ....S  
                          ...I...  
                          SP.K.IAN  
                          IMP.C...COS

Bibliography         *CIL* I 739  
                          Herzog 1937, no. 78  
                          Mlasowsky 1991, no. 176

76: Ides (13<sup>th</sup>) November, 25 BCE

Last known location No record

Findspot No record

Material Ivory

Length 37 mm

Width 11 mm

Height 11 mm ?

Perforation diameter No record

Text height No record

Photographs <https://auctions.bertolamifinearts.com/de/lot/2568/time-of-augustus-tessera-nummularia-25-bc/>



Text *ERASTUS*  
*IULI*  
Symbol (palm leaf ?)  
*SP.ID.NOV*  
*IMP.C.IX.M.SIL*  
Symbol (trident ?)

Bibliography Bertolami Fine Arts auction LOS Nr. 486-19 [AUKTION](#)



77: Kalends (1<sup>st</sup>) July, 24 BCE

Current Location Naples (77138); LH inspected in 2017

Findspot No record (Henzen 1848, p. 288)

Material Ivory

Length 40 mm

Width 8 mm

Height 7 mm

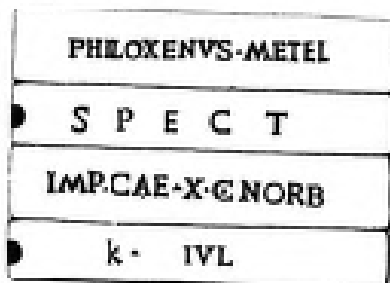
Perforation diameter 3 mm

Text height 2 mm



Drawing

Ritschl 1878b, Taf. XX fig. P



Text

*PHILOXENUS·METEL*

*SPECT*

*IMP·CAE·X·C·NORB*

*K·IUL*

Bibliography

*CIL* I 776g (suspect)

Herzog 1937, no. 79

Borriello et al. 1986, p. 234 no. 27

78: Kalends (1<sup>st</sup>) January, 21 BCE

Current Location PP (Dutuit 227); LH inspected in 2016

Findspot once in Rome (*CIL* I 741)

Material Ivory

Length 28 mm

Width 12 mm

Height 6 mm

Perforation diameter 2 mm

Text height 1 mm



Drawing

Ritschl 1878b, Taf. XXII fig. F



Text

*HYPOLITUS*  
*SEPTIMI*  
*SP. K. IAN*  
*M. LOLLIO. COS*

Bibliography

*CIL* I 741  
Herzog 1937, no. 80

79: Kalends (1<sup>st</sup>) April, 19 BCE  
 Last known location Rome? (*CIL* I 742)  
 Findspot Rome (*CIL* I 742)  
 Material No record  
 Length No record  
 Width No record  
 Height No record  
 Perforation diameter No record  
 Text height No record  
 Drawing Ritschl 1878b, Taf. XX fig. Q



Text *FELIX*  
*MUNDICI*  
*SP.K.APR*  
*C.SENTIO*

Bibliography *CIL* I 742  
 Herzog 1937, no. 82

80: Kalends (1<sup>st</sup>) January, 19 BCE

Current Location BNF (Froehner 22); LH inspected in 2017

Findspot No record

Material Ivory

Length 24 mm

Width 10 mm

Height 6 mm

Perforation diameter 2 mm

Text height 1-2 mm



Text *AQUTUS*  
*VOLCACI*  
*SP.K.IAN*  
*C.SENT.SAT*

Bibliography Babelon 1928, no. 24  
Herzog 1937, no. 81

81: June, 19 BCE

Last known location Modena, Museo Estense; now untraceable (Buonopane 2017, p. 219)

Findspot Soliera, near Modena (*CIL* I 743)

Material Ivory (Cavedoni 1834, 231)

Length No record

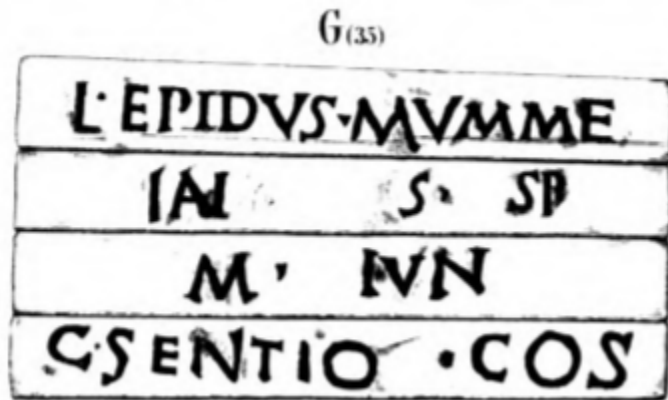
Width No record

Height No record

Perforation diameter No record

Text height No record

Drawing Ritschl 1878b, Taf. XXII fig. G



Text *LEPIDUS.MUMME*  
*IAN...S.SP*  
*M.IUN*  
*C.SENTIO.COS*

Bibliography *CIL* I 743=XI 861  
Herzog 1937, no. 83

82: Kalends (1<sup>st</sup>) April, 17 BCE  
Last known location No record  
Findspot Rome (Fr. Vettorium, *CIL* I 744)  
Material No record  
Length No record  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record

Text  
*CELER*  
*FULVI*  
*SP.K.APR*  
*C.FURN.C.SIL*

Bibliography  
*CIL* I 744  
Herzog 1937, no. 84

83: Kalends (1<sup>st</sup>) December, 17 BCE

Last known location Musée archéologique de Sousse  
Findspot Hadrumetum, found at the foot of the Qasba (Foucher 1968, p. 215)  
Material Bone (Foucher 1968, p. 215 no. 17)  
Length 46 mm  
Width 6 mm  
Height No record  
Perforation diameter No record  
Text height No record

Text *DIORUS*  
*TREBONI*  
*SP.K.DEC*  
*C.FURN.C.SILA*

Bibliography Foucher 1968, p. 215 no. 17  
*AE* 1968.619

84: Ides (13<sup>th</sup>) June, 14 BCE

Last known location	No record
Findspot	No record
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>L.STLACCIUS</i> <i>BASSUS</i> <i>SP.ID.IUN</i> <i>M.LICIN.CN.LENT</i>
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Bibliography	<i>CIL</i> I 745 Herzog 1937, no. 85
--------------	---



85: April, 13 BCE

Current Location Modena (259882); LH inspected in 2017

Findspot Mutina, burial

Material Bone

Length 60 mm

Width 12 mm

Height 8 mm

Perforation diameter 2 mm

Text height 3 mm

Photo Benassi 2011, p. 71



Text *CHILO. ...ANI [P]*  
*SP M.APRI*  
*TI CLAU.NERO*  
*P.QUIN.VAR COS*

Bibliography Benassi 2011, p. 70-71  
Buonopane 2017, p. 219

86: 4<sup>th</sup> March, 9 BCE

Current Location Naples (77084); LH inspected in 2017

Findspot No record

Material Bone

Length 49 mm

Width 9 mm

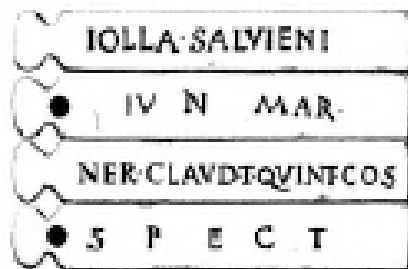
Height 10 mm

Perforation diameter 2 mm

Text height 2 mm



Drawing Ritschl 1878b, Taf. XXI fig. R



Text  
*IOLLA.SALVIENI*  
*IV N MAR*  
*NER.CLAUD.T.QUINT.CO*  
*SPECT*

Bibliography  
*CIL* I 776f (suspect or false)  
Herzog 1937, no. 86

87: Ides (13<sup>th</sup>) April, 8 BCE

Last known location	No record
Findspot	No record
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>ANTHUS</i> <i>MARI</i> <i>SP.ID.APR</i> <i>C.ASIN.C.CENS.COS</i>
------	--

Bibliography	<i>CIL</i> I 746 Herzog 1937, no. 87
--------------	---

88: Kalends (1<sup>st</sup>) January, 7 BCE  
 Last known location Liverpool, Hertz Museum (*CIL* I 747)  
 Findspot Florence ? (*CIL* I 747)  
 Material Ivory (Hertz 1851, p. 152 no. 33)  
 Length No record  
 Width No record  
 Height No record  
 Perforation diameter No record  
 Text height No record  
 Reconstruction Gori 1743, *praef.* XXXI



Text *SERVILIUS*  
*CLEMES*  
*SPKIAN*  
*TI·CLAV·CN·PISON*

Bibliography Gori 1743, *praef.* XXXI  
 Hertz 1851, p. 152 no. 33  
*CIL* I 747  
 Herzog 1937, no. 88

89: 23<sup>rd</sup> October, 6 BCE

Last known location Antiquarium on the Caelian Hill (Pietrangeli 1940, p. 200-202)

Findspot purchased in Rome (Pietrangeli 1940, p. 200-202)

Material Bone

Length 42 mm

Width 11 mm

Height 8 mm

Perforation diameter No record

Text height No record

Drawing Pietrangeli 1940, p. 200 no. 3



Text *CHRYSEROS*  
*GRANI*  
*SP·X·K·NOV*  
*D·LAE·C·ANT·COS*

Bibliography Pietrangeli 1940, p. 200 no. 3

90: Kalends (1<sup>st</sup>) April, 4 BCE

Last known location Izmir

Findspot Ephesus, south of the eastern stoa of the prytanée at depth of 0.8 meters

Material Ivory (Eichler 1965, p. 94)

Length 35 mm (Eichler 1965, p. 94)

Width No record

Height No record

Perforation diameter No record

Text height No record

Text

*CALYX*

*AUTRONI*

*SP.K.APR*

*L.PAS.C.CAL.COS*

Bibliography

Eichler 1965, p. 94

*AE* 1967.486

91: Kalends (1<sup>st</sup>) June, 3 BCE

Last known location No record; copy in the BM (1772,0311.7; cf. *CIL* I 748)

Findspot Rome ? (*CIL* I 748)

Material No record

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text  
*DEMETRIUS*  
*FADENI*  
*SP.K.IUN*  
*L.LENT.M.MES.COS*

Bibliography  
*CIL* I 748  
Herzog 1937, no 89

92: Kalends (1<sup>st</sup>) December, 2 BCE

Current Location     Hannover (1675); LH inspected in 2017  
Findspot             once in Rome (CIL I 749)  
Material             Ivory (Bone- Mlasowsky 1991, no. 177)  
Length               44 mm  
Width                12 mm  
Height               7 mm  
Perforation diameter 2 mm  
Text height          2-5 mm  
Photographs         Kestner Museum



Drawing             Ritschl 1878b, Taf. XXII fig. H



Text                 *FLORONIUS*  
                       *ROMANUS*  
                       *SP.K.DEC*  
                       *L.CAN.Q.FABR.COS*

Bibliography        *CIL I 749*  
                       Herzog 1937, no. 90  
                       Mlasowsky 1991, no. 177



93: Kalends (1<sup>st</sup>) April, 1 BCE

Current Location BNF (Froehner 25); LH inspected in 2017  
Findspot Rome (October 1907, Froehner vol. 10, p. 441)  
Material Ivory  
Length 48 mm  
Width 12 mm  
Height 8 mm  
Perforation diameter 15 mm  
Text height 2-4 mm



Text *M·PILIVS*  
*PHOENIX*  
*SP·K·APR*  
*COSS·LENT·L·PIS·COS*

Bibliography Babelon 1928, no. 26 and pl. II no. 14  
Herzog 1937, no. 91

94: Kalends (1<sup>st</sup>) April, 3 CE

Current Location BNF (Froehner 26); LH inspected in 2017  
Findspot Rome (October 1885, Froehner vol. 5, p. 193)  
Material Ivory stained green  
Length 54 mm  
Width 11 mm  
Height 7 mm  
Perforation diameter 2 mm  
Text height 2-4 mm



Text *SYNEROS*  
*TONNI*  
*SP.K.APR*  
*L.AEL.M.SERV.COS*

Bibliography Babelon 1928, no. 28 and pl. II no. 1  
Herzog 1937, no. 92

95: Nones (5<sup>th</sup>) April, 3 CE

Current Location BNF (Froehner 27); LH inspected in 2017

Findspot once in Rome (Garrucci collection, Froehner vol. 10, p. 514)

Material Ivory

Length 45 mm

Width 10 mm

Height 8 mm

Perforation diameter 2 mm

Text height 2-3 mm



Text *PUDENS*  
*TITI*  
*SP·NON·APR*  
*L·AEL·M·SERVIL·COS*

Bibliography Babelon 1928, pl. II no. 16  
Herzog 1937, no. 93

96: 15<sup>th</sup> November, 3 CE

Current Location BNF (Froehner 28); LH inspected in 2017

Findspot No record

Material Ivory stained brown

Length 55 mm

Width 13 mm

Height 6 mm

Perforation diameter 2.5 mm

Text height 2-4 mm



Text *FURIUS*  
*GENER*  
*SP·XVII·K·DEC*  
*P·SIL·L·VOLV·S·COS*

Bibliography Babelon 1928, no. 30 pl. II no. 6  
Herzog 1937, no. 94



97: Ides (13<sup>th</sup>) June, 4 CE

Current Location Aquileia (19952); LH inspected in 2017

Findspot Aquileia

Material Ivory

Length 44 mm

Width 1 mm

Height 7 mm

Perforation diameter 2 mm

Text height 2-3 mm



Text *CHRESIMUS*  
*VIRI*  
*SP. ID. IUN*  
*SEX. AEL. C. SENT. COS*

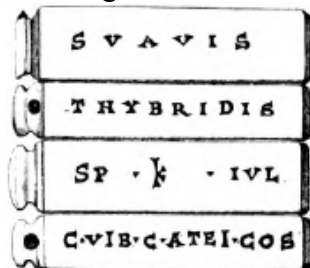
Bibliography Zaccaria 1992, no. 48

98: Kalends (1<sup>st</sup>) July, 5 CE

Current Location     Hannover (1670); LH inspected in 2017  
Findspot             once in Rome (Kestner, *CIL* I 750)  
Material             Ivory (Bone, Mlasowsky 1991, no. 178)  
Length               44 mm  
Width                10 mm  
Height               7 mm  
Perforation diameter 2 mm  
Text height          2-4 mm  
Photographs         Kestner Museum



Drawing               Ritschl 1878b, Taf. XXII fig. J



Text                   *SUAVIS*  
                          *THYBRIDIS*  
                          *SP.K.IUL*  
                          *C.VIB.C.ATEI.COS*

Bibliography         *CIL* I 750  
                          Herzog 1937, no. 95  
                          Mlasowsky 1991, no. 178

99: 23<sup>rd</sup> July, 5 CE

Current Location      Hannover (1664); LH inspected in 2017  
Findspot                Florence? (Gori 1743, no. 448; *CIL* I 751)  
Material                Ivory (Bone, Mlasowsky 1991, no. 179)  
Length                 42 mm  
Width                  11 mm  
Height                 7 mm  
Perforation diameter 2 mm  
Text height            2-5 mm  
Photographs          Kestner Museum



Drawing                Ritschl 1878b, Taf. XXII fig. K



Text                    *CINNAMUS*  
                          *H[OS]TILI*  
                          *SP.X.K.AUG*  
                          *C.VIB.C.ATEI.COS*

Bibliography         *CIL* I 751  
                          Herzog 1937, no. 96  
                          Mlasowsky 1991, no. 179

100: 17<sup>th</sup> January, 6 CE

Current Location BNF (Froehner 23); LH inspected in 2017  
Findspot acquired in Rome (1887, Froehner vol. 5, p. 224)  
Material Ivory  
Length 49 mm  
Width 10 mm  
Height 6 mm  
Perforation diameter 2 mm  
Text height 2-5 mm



Text *VITALIS*  
*PAPIRI*  
*SPECT. XVI. K. FEBR*  
*M. LEPID. L. ARRUN. CO*

Bibliography Babelon 1928, no. 25 and pl. II no. 10  
Herzog 1937, no. 96



101: Kalends (1<sup>st</sup>) February, 6 CE

Current Location Palazzo Massimo (65140); LH inspected in 2017

Findspot No record

Material Ivory (Brunati 1837, p. 30 no. LIX)

Length 53 mm

Width 14 mm

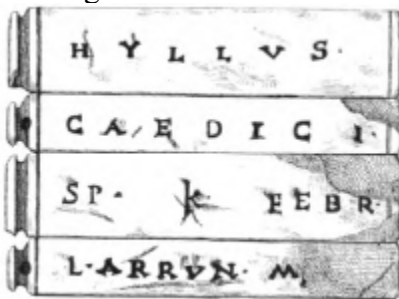
Height 10 mm

Perforation diameter 3 mm

Text height 2-3 mm



Drawing Ritschl 1878b, Taf. XXII fig. T



Text  
*HYLLUS*  
*CAEDICI*  
*SP.K.FEBR*  
*L.ARRUN.M...*

Bibliography  
*CIL* I 752  
Herzog 1937, no. 98

102: Kalends (1<sup>st</sup>) March, 6 CE

Current Location BNF (Froehner 24); LH inspected in 2017

Findspot Rome (1904, Froehner vol. 10, p. 415)

Material Ivory

Length 48 mm

Width 11 mm

Height 8 mm

Perforation diameter 2 mm

Text height 2-4 mm



Text *AMIANTHUS*  
*TRAGONIAE*  
*SP.K.MAR*  
*M.LEP.LARR.COS*

Bibliography Froehner 1901, no. 26  
Herzog 1937, no. 99

103: Kalends (1<sup>st</sup>) April, 6 CE

Last known location No record  
Findspot No record  
Material No record  
Length No record  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record  
Drawing Ritschl 1878b, Taf. XXI fig. T



Text *FAUSTUS*  
*ANTONI*  
*SP.K.APR*  
*M.LEP.L.ARR.COS*

Bibliography *CIL* I 753  
Herzog 1937, no. 100

104: Kalends (1<sup>st</sup>) October, 6 CE

Last known location No record

Findspot No record

Material No record

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text *INGENUOS*  
*ARRUNTI*  
*SP.K.OCT*  
*M.LEP.L.NON.COS*

Bibliography *CIL* I 754  
Herzog 1937, no. 101

105: 18<sup>th</sup> November, 6 CE

Current Location BNF (Froehner 29); LH inspected in 2017

Findspot once in Rome (Poniatowsky, *CIL* I 755); rediscovered in Florence (1864, Froehner vol. 4, p. 33)

Material Ivory with traces of minium

Length 47 mm

Width 12 mm

Height 7 mm

Perforation diameter 2 mm

Text height 2-4 mm



Text  
*PRIMVS*  
*SOCIORVM*  
*SP. XIV. K. DEC*  
*M. LEP. L. NONI. COS*

Bibliography  
*CIL* I 755  
Babelon 1928, pl. II no. 9  
Herzog 1937, no. 102

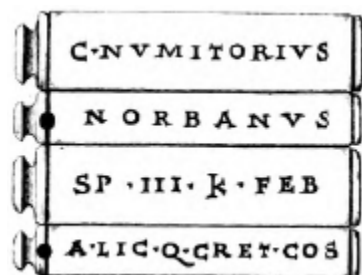
106: 30<sup>th</sup> January, 7 CE

Current Location PP (Dutuit 228); LH inspected in 2016  
Findspot once in Rome (Saulini, *CIL* I 756)  
Material Ivory  
Length 46 mm  
Width 11 mm  
Height 7 mm  
Perforation diameter 2 mm  
Text height 2-4 mm



Drawing

Ritschl 1878b, Taf. XXII fig. L



Text

*C.NUMITORIUS*  
*NORBANUS*  
*SP.III.K.FEB*  
*A.LIC.Q.CRET.COS*

Bibliography

*CIL* I 756  
*ILS* 5161f  
Herzog 1937, no. 103

107: Kalends (1<sup>st</sup>) April, 8 CE

Current Location BNF (Froehner 30); LH inspected in 2017

Findspot Rome (1912, Froehner vol. 11, p. 574)

Material Ivory

Length 44 mm

Width 12 mm

Height 8 mm

Perforation diameter 2 mm

Text height 2-4 mm



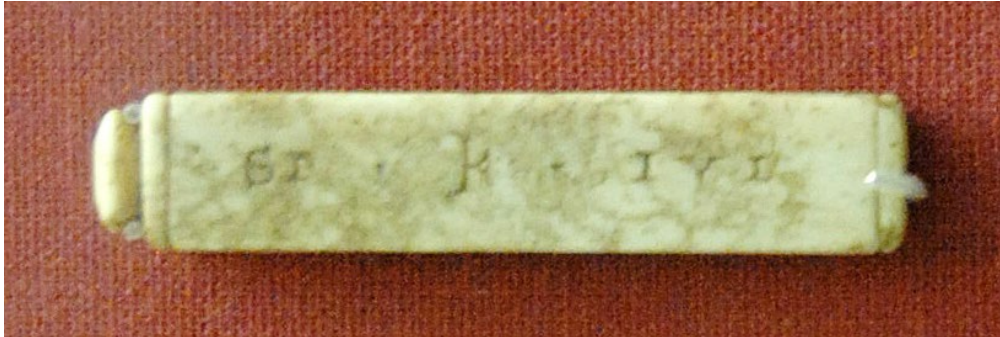
Text *FELICIO*  
*RUPILIAE*  
*SP. K. APR*  
*M. FUR. SEX. NON. COS*

Bibliography Babelon 1928, no. 32  
*AE* 1928.19  
Herzog 1937, no. 104



108: Kalends (1<sup>st</sup>) July, 10 CE

Current Location BM ([1873,0820.656](#)); LH saw on display but was granted no closer access  
Findspot once in Naples (Castellani, Henzen 1867, p. 37; BM reports findspot as Cales)  
Material Ivory  
Length 57 mm  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record  
Photo of third side © The Trustees of the British Museum (CC BY-NC-SA 4.0)



Text *SUAVIS*  
*POBLICI*  
*SP.K.IUL*  
*SER.LENT.Q.IUN.COS*

Bibliography Henzen 1867, p. 37  
*CIL* X 8070,4  
Herzog 1937, no. 105



109: Nones (5<sup>th</sup>) February, 11 CE

Last known location	No record
Findspot	No record
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>OLYMPUS</i> <i>PETILLI</i> <i>SP.N.FEB</i> <i>M'.LEP.T.STAT.COS</i>
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Bibliography	<i>CIL</i> I 759 Herzog 1937, no. 106
--------------	--

110: Kalends (1<sup>st</sup>) April, 11 CE

Last known location Antiquarium on the Caelian Hill (Pietrangeli 1940, p. 200-202)

Findspot purchased in Rome (Pietrangeli 1940, p. 200-202)

Material Bone (Pietrangeli 1940, p. 201 no. 4)

Length 58 mm

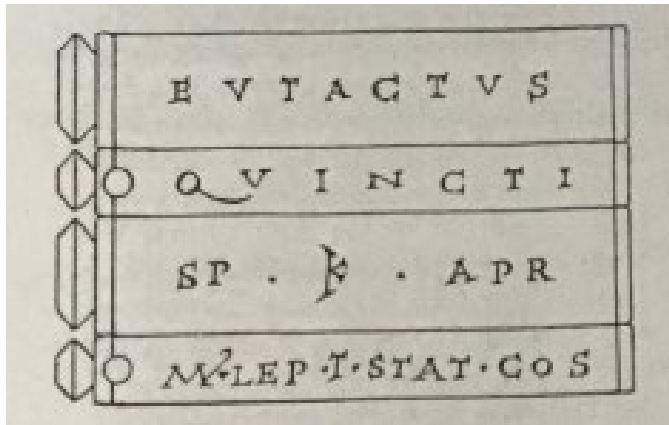
Width 12 mm

Height 7 mm

Perforation diameter No record

Text height No record

Drawing Pietrangeli 1940, p. 201 no. 4



Text *EUTACTUS*  
*QUINCTI*  
*SP.K.APR*  
*M'.LEP.T.STAT.COS*

Bibliography Pietrangeli 1940, p. 201 no. 4

111: Ides (15<sup>th</sup>) October, 11 CE

Curent Location BNF (Froehner 31); LH inspected in 2017

Findspot No record

Material Ivory

Length 56 mm

Width 14 mm

Height 9 mm

Perforation diameter 1 mm (second perforation=3 mm)

Text height 2-5 mm



Text *FELICIO*  
*POMPONI*  
*SP.ID.OCT*  
*L.CASS.T.STAT.COS*

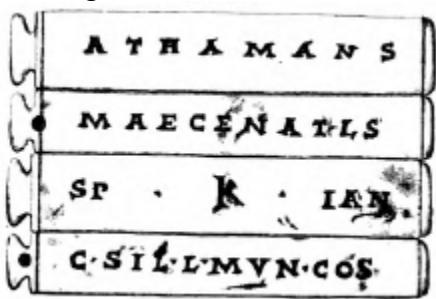
Bibliography Babelon 1928, no. 34 and pl. II no. 5  
Herzog 1937, no. 107

112: Kalends (1<sup>st</sup>) January, 13 CE

Current Location Florence (1532); LH inspected in 2017  
Findspot once in Florence (Medici Museum, *CIL* I 760)  
Material Bone?  
Length 58 mm  
Width 10 mm  
Height 8 mm  
Perforation diameter 2 mm  
Text height 2-4 mm



Drawing Ritschl 1878b, Taf. XXII fig. M



Text  
*ATHAMANS*  
*MAECENATIS*  
*SP.K.IAN*  
*C.SIL.L.MUN.COS*

Bibliography  
*CIL* I 760  
Herzog 1937, no. 108

113: Ides (13<sup>th</sup>) February, 13 CE

Current Location BNF (Froehner 32); LH inspected in 2017  
Findspot acquired in Rome (November 1919, Froehner vol. 11, p. 604)  
Material Ivory  
Length 53 mm  
Width 12 mm  
Height 7 mm  
Perforation diameter 2 mm  
Text height 2-5 mm



Text *TYRANNUS*  
*TIBERI*  
*SP.ID.FEB*  
*C.SIL.L.MUN.COS*

Bibliography Babelon 1928, no. 35 and pl. II no. 8  
Herzog 1937, no. 109

114: Nones (5<sup>th</sup>) January, 15 CE

Current Location BNF (Froehner 40e); LH inspected in 2017  
Findspot acquired in Rome (1902, Froehner vol. 10, p. 396; Andreau 2001, p. 332)  
Material Ivory  
Length 65 mm  
Width 13 mm  
Height 9 mm  
Perforation diameter 2 mm  
Text height 2-3 mm



Text *PLE[B]EIVS*  
*VARI*  
*SP. N. IAN*  
*DRVS. C. C. NORB. COS*

Bibliography Froehner vol. 10, p. 396  
Andreau 2001, p. 331-332

115: Ides (13<sup>th</sup>) June, 15 CE

Current Location BM (1814,0704.1082); LH inspected in 2016

Findspot No record

Material Ivory? (BM lists as Bone)

Length 52 mm

Width 12 mm

Height 7 mm

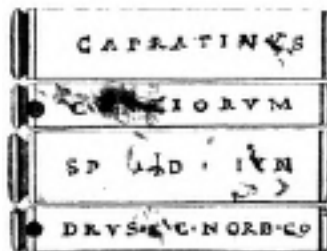
Perforation diameter 3 mm

Text height 2 mm



Drawing

Ritschl 1878b, Taf. XXI fig. U



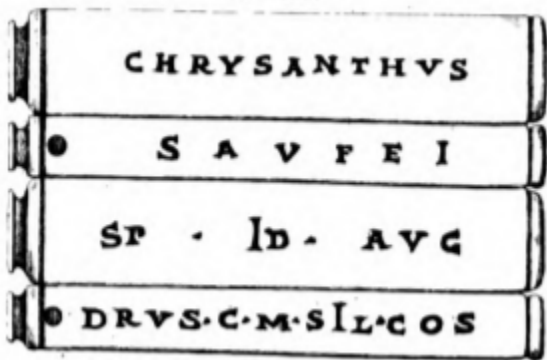
Text

*CAPRATINUS*  
*CU[RT]IORUM*  
*SP. ID. IUN*  
*DRUS. C. C. NORB. CO*

Bibliography

*CIL* I 761  
Herzog 1937, no. 110

116: Ides (13<sup>th</sup>) August, 15 CE  
 Last known location Cortona ? (museum, *CIL* I 762)  
 Findspot No record  
 Material No record  
 Length No record  
 Width No record  
 Height No record  
 Perforation diameter No record  
 Text height No record  
 Drawing Ritschl 1878b, Taf. XXII fig. N



Text *CHRYSANTHUS*  
*SAUFEI*  
*SP.ID.AUG*  
*DRUS.C.M.SIL.COS*

Bibliography *CIL* I 762  
 Herzog 1937, no. 111

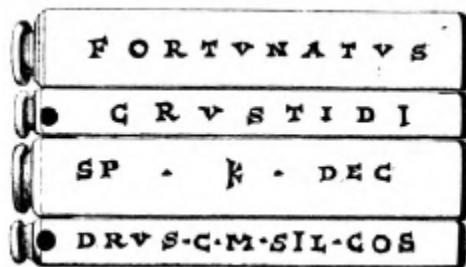


117: Kalends (1<sup>st</sup>) December, 15 CE

Current Location      Hannover (1666); LH inspected in 2017  
Findspot                once in Rome (Capranesi, *CIL* I 763)  
Material                 Ivory/Bone  
Length                   60 mm  
Width                    10 mm  
Height                   6 mm  
Perforation diameter 2 mm  
Text height            2 mm  
Photographs            Kestner Museum



Drawing                 Ritschl 1878b, Taf. XXII fig. S



Text                     *FORTUNATUS*  
                              *CRUSTIDI*  
                              *SP.K.DEC*  
                              *DRUS.C.M.SIL.COS*

Bibliography            *CIL* I 763  
                              Herzog 1937, no. 112  
                              Mlasowsky 1991, no. 180

118: Kalends (1<sup>st</sup>) February, 19 CE

Current Location BNF (Chabouillet 3249); LH inspected in 2017

Findspot once in Rome (*CIL* I 764)

Material Bone?

Length 53 mm

Width 15 mm

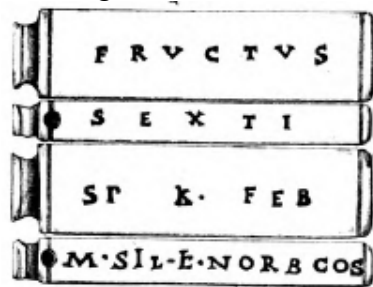
Height 7 mm

Perforation diameter 2 mm

Text height 2-3 mm



Drawing Ritschl 1878b, Taf. XXII fig. Q



Text *FRUCTUS*  
*SEXTI*  
*SP.K.FEB*  
*M.SIL.L.NORB.COS*

Bibliography *CIL* I 764  
Herzog 1937, no. 113

119: Nones (5<sup>th</sup>) January, 24 CE  
Last known location No record  
Findspot No record  
Material No record  
Length No record  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record

Text *REPETINUS*  
*CANINI*  
*SP.N.IAN*  
*SER.COR.L.VIS*

Bibliography *CIL* I 765  
Herzog 1937, no. 115

120: Kalends (1<sup>st</sup>) January, 24 CE

Current Location BNF (Froehner 33); LH inspected in 2017  
Findspot once in collection Gréau (Froehner vol. 5, p. 286)  
Material Ivory (Froehner vol. 5, p. 287)  
Length 45 mm  
Width 10 mm  
Height 10 mm  
Perforation diameter 2 mm  
Text height 2-5 mm



Text *[PR]OC[U]LUS*  
*PRISCUS*  
Symbol  
*S[PK] IAN*  
*SER.COR.L.[VIS]*  
Symbol

I thank Werner Eck for his suggested reading of *PROCULUS*. I read the text on the first side as ...[C or O]C...IUS. The lower bar of the *L* is just discernible. *Proculus* is a better candidate than *Valerius* (Herzog 1937, no. 114).



Bibliography

Babelon 1928, no. 37  
Herzog 1937, no. 114

121: Nones (5<sup>th</sup>) September, 25 CE

Current Location      Hannover (1671); LH inspected in 2017

Findspot                once in Rome (Capranesi, *CIL* I 766)

Material                Bone?

Length                 41 mm

Width                  12 mm

Height                 7 mm

Perforation diameter 3 mm

Text height            2-3 mm



Drawing                Ritschl 1878b, Taf. XXII fig. P



Text                    *PINUS*  
*DOMITI*  
*SP.N.SEP*  
*M.ASIN.C.PET*

Bibliography         *CIL* I 766  
Herzog 1937, no. 116  
Mlasowsky 1991, no. 181

122: Kalends (1<sup>st</sup>) August, 26 CE

Last known location Antiquarium on the Caelian Hill (Pietrangeli 1940, p. 200-202)

Findspot purchased in Rome (Pietrangeli 1940, p. 200-202)

Material Bone (Pietrangeli 1940, p. 201 no. 5)

Length 53 mm

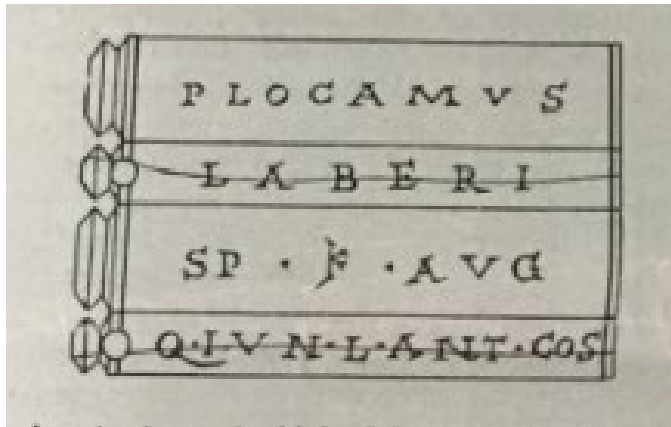
Width 10 mm

Height 6 mm

Perforation diameter No record

Text height No record

Drawing Pietrangeli 1940, p. 201 no. 5



Text *PLOCAMUS*  
*LABERI*  
*SP.K.AUG*  
*Q.IUN.L.ANT.COS*

Bibliography Pietrangeli 1940, p. 201 no. 5

123: Kalends (1<sup>st</sup>) May, 29 CE

Current Location BNF (Froehner 34); LH inspected in 2017

Findspot No record (once in Martinetti collection, Froehner vol. 10, p. 462)

Material Ivory stained brown

Length 49 mm

Width 11 mm

Height 7 mm

Perforation diameter 2 mm

Text height 2-3 mm



Text *OPTATUS*  
*VERGILI*  
*SP.K.MAI*  
*L.RUB.C.FUF.COS*

Bibliography Babelon 1928, no. 38 and pl. II no. 3  
Herzog 1937, no. 117



124: Ides (15<sup>th</sup>) July, 29 CE

Last known location	No record
Findspot	No record
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>CELER</i> <i>CLODI</i> <i>SP.ID.IUL</i> <i>L.ASPR.A.PLAUT.C</i>
------	---

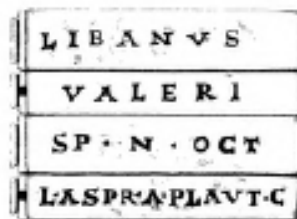
Bibliography	<i>CIL</i> I 767 Herzog 1937, no. 118
--------------	--

125: Nones (7<sup>th</sup>) October, 29 CE

Current Location Petit Palais (Dutuit 229); LH inspected in 2016  
Findspot once in Rome (Saulini, *CIL* I 768)  
Material Ivory with traces of *minium*  
Length 50 mm  
Width 9 mm  
Height 8 mm  
Perforation diameter 2 mm  
Text height 2 mm



Drawing Ritschl 1878b, Taf. XXI fig. W



Text  
*LIBANUS*  
*VALERI(US)*  
*SP.N.OCT*  
*L.ASPR.A.PLAUT.C*

Line 3 has been read as *VALERI* (*CIL* I 768 and Herzog). The *US* is above and to the right of the main text. These additional letters are not incised to the depth as the other letters on that side.



Bibliography  
*CIL* I 768  
Herzog 1937, no. 119

126: 26<sup>th</sup> March, 32 CE

Last known location	No record
Findspot	purchased in Rome ( <i>CIL</i> I 769)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>CARUS</i> <i>HOSTILI</i> <i>SP.VII.K.APR</i> <i>CAM.ARR.CN.DOM</i>
------	--

Bibliography	<i>CIL</i> I 769 Herzog 1937, no. 120
--------------	--

127: 20<sup>th</sup> April, 32 CE

Current Location BM (1814,0704.1081); LH inspected in 2016

Findspot No record

Material Ivory stained green

Length 47 mm

Width 8 mm

Height 8 mm

Perforation diameter 2 mm

Text height 2-3 mm



Text *HELIODORUS*  
*CAUSINI*  
*SP.XII.K.MAI*  
*CAM.ARR.CN.DOM*

Bibliography Herzog 1937, no. 121

128: 3<sup>rd</sup> June, 33 CE

Last known location	No record
Findspot	No record
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>MYRTILUS</i> <i>ATTIAE</i> <i>SP.III.N.IUN</i> <i>L.SULL.L.SULP</i>
------	---

Bibliography	<i>CIL</i> I 770 Herzog 1937, no. 122
--------------	--

129: 33 CE (between January 1<sup>st</sup> and June 30<sup>th</sup>)  
Last known location once with Mommsen (*CIL* I 771)  
Findspot No record  
Material Ivory (*CIL* I 771)  
Length No record  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record

Text ...  
...  
...  
*L.SULP.L.SULLA*

Bibliography *CIL* I 771  
Herzog 1937, no. 123

130: Kalends (1<sup>st</sup>) January, 39 CE

Current Location BNF (Froehner 35); LH inspected in 2017  
Findspot acquired in Rome (1909, Froehner vol. 10, p. 500)  
Material Ivory  
Length 43 mm  
Width 8 mm  
Height 6 mm  
Perforation diameter 2 mm  
Text height 2-3 mm



Text *ECHIUS*  
*IULI*  
*SP.K.IAN*  
*C.CAESAR.II.L.AP*

Bibliography Babelon 1928, no. 39  
Herzog 1937, no. 124

131: Kalends (1<sup>st</sup>) February, 42 CE

Last known location	No record
Findspot	Rome, Villa Pamphili ( <i>CIL</i> I 772)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>PINITUS</i> <i>ALLEI</i> <i>SP.K.FEB</i> <i>TI.CL.CAES.II</i> <i>C.CAEC</i> <i>COS</i>
------	--

Bibliography	<i>CIL</i> I 772 Herzog 1937, no. 125
--------------	--



132: Kalends (1<sup>st</sup>) January, 44 CE

Last known location	No record
Findspot	No record
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>PHOEBUS</i> <i>FABI</i> <i>SP.K.IAN</i> <i>T.STAT.C.SAL</i>
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Bibliography	<i>CIL</i> I 776 y (suspect) Herzog 1937, no. 126
--------------	--

133: Ides (13<sup>th</sup>) January, 44 CE

Current Location PP (Dutuit 231); LH inspected in 2016

Findspot No record

Material Ivory with traces of minium

Length 50 mm

Width 8 mm

Height 6 mm

Perforation diameter 1.5 mm

Text height 3 mm



Text *CORINTHUS*  
*SCANTI*  
*SP.ID.IAN*  
*T.STAT.C.SALL*

Bibliography Froehner 1901, no. 217  
Herzog 1937, no. 127

134: Kalends (1<sup>st</sup>) March, 45 CE

Last known location Antiquarium on the Caelian Hill (Pietrangeli 1940, p. 200-202)

Findspot purchased in Rome (Pietrangeli 1940, p. 200-202)

Material Bone

Length 49 mm

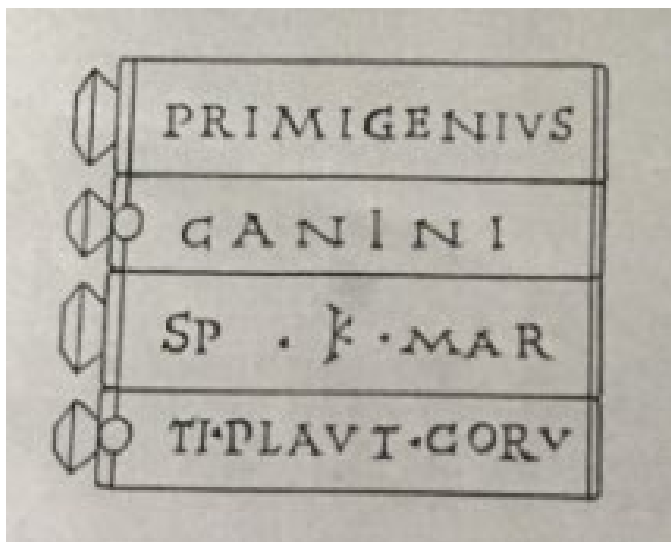
Width 10 mm

Height 8 mm

Perforation diameter No record

Text height No record

Drawing Pietrangeli 1940, p. 201 no. 6



Text *PRIMIGENIVS*  
*CANINI*  
*SP · K · MAR*  
*TI · PLAUT · CORV*

Bibliography Pietrangeli 1940, p. 201 no. 6

135: Kalends (1<sup>st</sup>) April, 45 CE  
Last known location No record  
Findspot Tusculum  
Material No record  
Length No record  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record

Text *PHILETUS*  
*RUTILI*  
*SP.K.APR*  
*TI.PLAU.ET.COR*

Bibliography Herzog 1937, no. 128

136: 27<sup>th</sup> September, 51 CE

Last known location Perugia? (*ILS* 5161g)

Findspot Rome (*ILS* 5161 g)

Material No record

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text

*MAXIMUS*

*MANNEI*

*SP.V.K.OCT*

*TI.CLA.V.L.CAL.VET*

Bibliography

Henzen 1871, p. 151

*ILS* 5161g

Herzog 1937, no. 129

137: Ides (15<sup>th</sup>) October, 18 CE?<sup>1</sup>

Current Location BNF (Froehner 36); LH inspected in 2017  
Findspot Rome (*ILS* 5161 h)  
Material Ivory  
Length 32 mm  
Width 7 mm  
Height 6 mm  
Perforation diameter No record  
Text height 2 mm



Text *CLEMEN*  
...  
*[SP].ID.O...*  
*M.VIPST.C.R[U]*

Bibliography *ILS* 5161h  
Herzog 1937, no. 135

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<sup>1</sup> Herzog (1937), no. 135, dated this *tessera* was dated to 71 or 72 CE. Upon reviewing Cooley's reconstruction of the consular fasti, I believe the consuls named are C. Rubellius Blandus and M. Vipstanus Gallus, suffect consuls from August of 18 CE. Taylor and Broughton (1968), 172, agree that the consuls named are those of 18 CE.

138: Kalends (1<sup>st</sup>) August, 61 CE

Current Location Louvre (S2706); LH inspected in 2016

Findspot No record

Material Ivory?

Length 63 mm

Width 9 mm

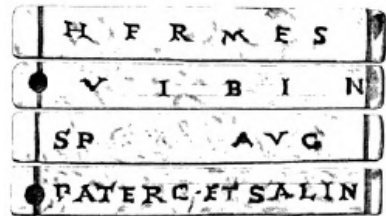
Height 8 mm

Perforation diameter 3 mm

Text height 3 mm



Drawing Ritschl 1878b, Taf. XXI fig. Y



Text *HERMES*  
*VIBINI*  
*SP. K. AUG*  
*PATERC. ET. SALIN*

*CIL* I 776 b records the text on the second side as *VIBI*. The text on the second side could be *VIBII* (Herzog 1937, no. 130). I read *VIBINI* with the last I in ligature. If *VIBINI*, the name is suspect (*CIL* I 776b).



Bibliography *CIL* I 776b (suspect)  
Herzog 1937, no. 130

139: 24<sup>th</sup> November, 66 CE

Current Location BNF (Froehner 40d); LH inspected in 2017

Findspot once in Rome (Garrucci collection, Froehner vol. 10, p. 515)

Material Ivory

Length 69 mm

Width 11 mm

Height 7 mm

Perforation diameter 3 mm

Text height 3 mm



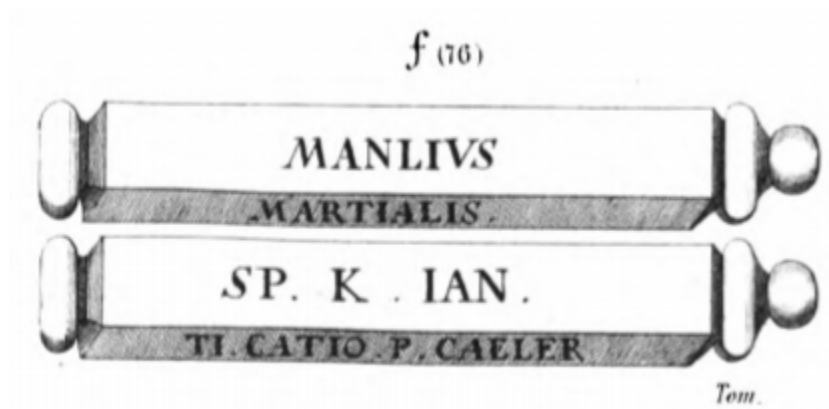
Text *CURTIUS*  
*PROCULUS*  
*SP. VIII K. DEC*  
*M VETTIO M ARR*

Bibliography *CIL* I 776  
Herzog 1937, no. 131



140: Kalends (1<sup>st</sup>) January, 68 CE

Last known location No record  
Findspot No record  
Material No record  
Length No record  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record  
Drawing Ritschl 1878b, Taf. XXI fig. F



Text *MANLIUS*  
*MARTIALIS*  
*SP.K.IAN*  
*TI.CATIO.P.CAELER*

Bibliography *CIL* I 776d (suspect or false)  
Herzog 1937, no. 132

141: Kalends (1<sup>st</sup>) February, 71 CE

Last known location Antiquarium Berlin (Herzog 1937, no. 133)

Findspot No record

Material No record

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

Text *DONATUS*  
*LICINI*  
*SP.K.FEB*  
*IMP.CAES.VESP.III.M.C.N*

Bibliography Herzog 1937, no. 133

142: 20<sup>th</sup> July, 71 CE

Last known location	No record
Findspot	Rome in a cemetery ( <i>CIL</i> I 773)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>SALVIUS</i> <i>CALPURNI</i> <i>SP.XIII.K.AUG</i> <i>L.FLAVIO.FIM.C.ATI</i>
------	--

Bibliography	<i>CIL</i> I 773 Herzog 1937, no. 134
--------------	--

143: Ides (13<sup>th</sup>) January, 74 CE

Last known location Paris (Adolphe Noël des Verges, *CIL* I 774)

Findspot once in Rome (Depoletti, *CIL* I 774 and *ILS* 5161i)

Material No record

Length No record

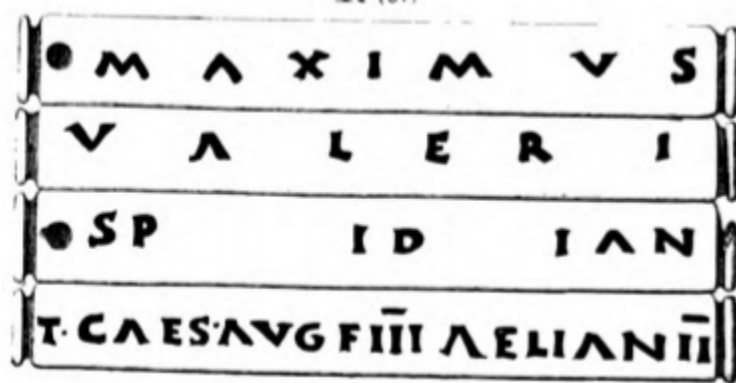
Width No record

Height No record

Perforation diameter No record

Text height No record

Drawing Ritschl 1878b, Taf. XXII fig. R



Text *MAXIMUS*  
*VALERI*  
*SP ID IAN*  
*TI CAES AUG FIII AELIANII*

Bibliography *CIL* I 774  
*ILS* 5161i  
Herzog 1937, no. 137

144: 24<sup>th</sup> April, 83 CE

Current Location BNF (Froehner 40c); LH inspected in 2017  
Findspot acquired in Rome (1914, Froehner vol. 11, p. 594)  
Material Ivory  
Length 88 mm  
Width 11 mm  
Height 10 mm  
Perforation diameter 3 mm  
Text height 2-3 mm



Text *ARSINAS*  
*IULI*  
*SP VIII K MAI*  
*CFISIOSABINMANNIOMESSAL*

Bibliography *AE* 1969-70.6

145: 5<sup>th</sup> October, 69-96 CE (*AE* 1994.140)

Current Location BM ([1889,0520.1](#)); LH inspected in 2017

Findspot Rome (*ILS* 5151k) or Lanuvium ? (BM [catalog](#))

Material Ivory stained brown

Length 78 mm

Width 9 mm

Height 5.5 mm (at left end), 6 mm (at right end)

Perforation diameter 2 mm

Text height 2-3 mm



Text *MODERATUS*  
*LUCCEI*  
*SP. III. NON. OCT*  
*L. MINIC. L. PLOTIO*

Bibliography *ILS* 5151k  
Herzog 1937, no. 138  
*AE* 1994.140

146: Ides (13<sup>th</sup>) April

Current Location Excavation Inventory- A412.746

Findspot Gabii, Temple of Juno Gabina (stratigraphic context dated to the 2<sup>nd</sup> century CE)

Material Bone

Length 32 mm

Width 13 mm

Height No record

Perforation diameter No record

Text height No record

Photo Décamps 2017, p. 26 fig. 27



Text

*SILO*

...

*SP.ID.AP*

*...L.A...*

Bibliography

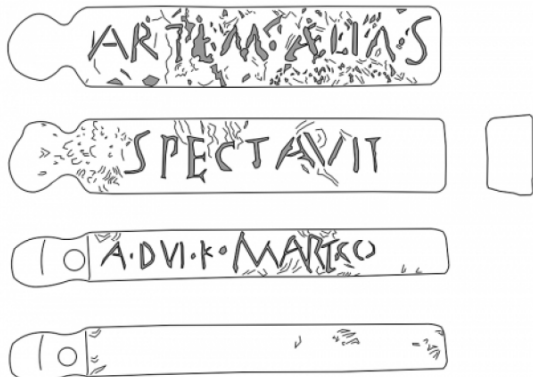
Glisoni et al. 2017, 26

147: 24<sup>th</sup> February

Current Location No record  
Findspot Agrigentum, deposit near door in Casa III M  
Material Bone  
Length 58 mm  
Width 10 mm  
Height 7 mm  
Perforation diameter No record  
Text height No record  
Photo Belfiori 2019, fig. 11 (presents the sides out of order)



Drawing Belfiori 2020, fig. 12



Text *ARTEM.[AEL]IAS*  
Blank  
*SPECTAVIT*  
*A.D.VI.K.MART.CO*

Bibliography Belfiori 2019, p. 11-14



148: Kalends (1<sup>st</sup>) June

Last known location Antiquarium Museum (Francis Loth., *CIL* I 757)

Findspot No record

Material No record

Length No record

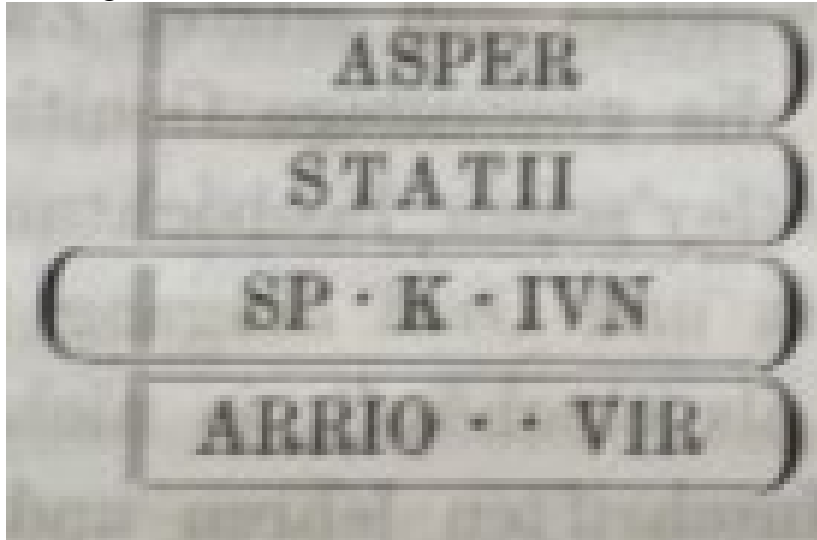
Width No record

Height No record

Perforation diameter No record

Text height No record

Drawing Ritschl 1864, no. 68



Text *ASPER*  
*STATII*  
*SP.K.IUN*  
*ARRIO...VIR*

Bibliography *CIL* I 757  
Ritschl 1864, no. 68

149: Ides

Current Location BNF (Froehner 38); LH inspected in 2017  
Findspot acquired in Rome (1886, Froehner vol. 5, p. 215)  
Material Ivory  
Length 51 mm  
Width 11 mm  
Height 7 mm  
Perforation diameter 3 mm  
Text height 2-4 mm



Text

...  
*SEXTI*  
*SP.ID.*  
*[P.L]...COS*

Bibliography

Babelon 1928, no. 42 and pl. II no. 21  
Herzog 1937, no. 139

150: Ides (13<sup>th</sup>) December

Current Location BNF (Froehner 37); LH inspected in 2017  
Findspot acquired in Rome (1914, Froehner vol. 11, p. 586)  
Material Ivory  
Length 29 mm  
Width 9 mm  
Height 7 mm  
Perforation diameter 2 mm  
Text height 2 mm



Text ...  
*SILI*  
*SP.ID.[D]EC*  
*C.L...S[L]*

Bibliography Babelon 1928, no. 41  
Herzog 1937, no. 136

151:

Current Location	BNF (Froehner 40); LH inspected in 2017
Findspot	acquired in Rome (1915, Froehner vol. 11, p. 599)
Material	Ivory
Length	20 mm
Width	9 mm
Height	6 mm
Perforation diameter	2 mm
Text height	1.5 mm



Text	<i>RUBRI</i>
	Blank
	Blank
	Blank

Bibliography	Babelon 1928, no. 44
--------------	----------------------

152:

Last known location Private collection (Pedroni 1995, p. 170)

Findspot No record

Material Bone

Length 23 mm

Width 6.5 mm

Height 6 mm

Perforation diameter 2 mm

Text height circa 4 mm

Photo Pedroni 1995, p. 165 fig. 1-4b



Text *PAMPIL*  
*CREMUT*  
*SPECTA*  
Symbol (palm leaf ?)

Bibliography Pedroni 1995, p. 170 and fig. 1-4b  
*AE* 1995.1815

153:

Last known location	Collection Jules Sambon? Or Naples ( <i>ILLRP</i> 993)
Findspot	Tomb in Capua ( <i>CIL</i> X 8070, 6)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record
Photo	Sambon, 1911 Pl. XXIV no. 516



Text *DIODORUS [B]EL*

*SPEC*

Bibliography *CIL* I<sup>2</sup> 947  
*ILLRP* 993

154:

Last known location Tarquinii (in museum, *ILLRP* 994)  
Findspot Tarquinii  
Material Ivory (*CIL* XI 6728,4)  
Length 10 mm (*ILLRP* 994)  
Width 5 mm  
Height 5 mm  
Perforation diameter No record  
Text height No record

Text *GENTI.PACONI.T.S*  
Symbol (crown and palm leaf ?)  
*SPECTAVIT*  
Symbol (caduceus and trident ?)

Bibliography *CIL* XI 6728,4  
*CIL* I<sup>2</sup> 948  
Herzog 1937, no. 6  
*ILLRP* 994

155:

Current Location BNF (Froehner 1); LH inspected in 2017  
Findspot once in Rome (Pollack, *CIL* I<sup>2</sup> 2517)  
Material Ivory  
Length 44 mm  
Width 9 mm  
Height 8 mm  
Perforation diameter 1.5 mm  
Text height 3 mm



Text *PAMPILUS.FULVI*  
Symbol (dolphin ?)  
*SPECTAVIT*  
Symbol (burning altar ?)

Bibliography Babelon 1928, pl. II no. 12  
*CIL* I<sup>2</sup> 2517  
Herzog 1937, no. 8  
*ILLRP* 995



156:

Last known location with F. von Duhn (*ILLRP* 996)  
Findspot near Capua (*CIL* X 8070, 5)  
Material Bone (*CIL* X 8070, 5)  
Length No record  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record

Text *PAMPHIL.SOCIORU[M]*  
Blank ?  
*SPECTAVIT*  
Blank ?

Bibliography *CIL* I<sup>2</sup> 951=X 8070, 5  
Herzog 1937, no. 10  
*ILLRP* 996

157:

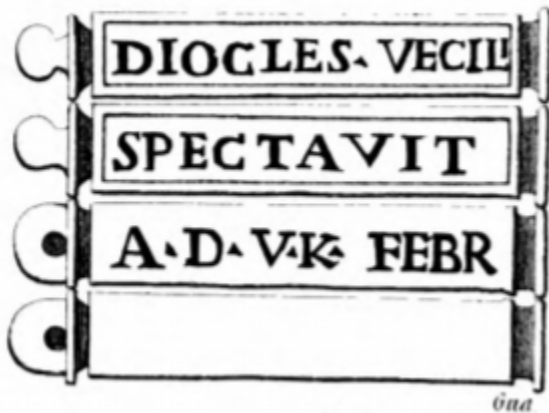
Current Location	Presumed lost ( <i>ILLRP</i> 997)
Findspot	Rome, reportedly on <i>monte della Giustizia</i> ( <i>CIL</i> I <sup>2</sup> 949)
Material	No record
Length	No record
Width	No record
Height	No record
Perforation diameter	No record
Text height	No record

Text	<i>PILEMO.FULVI.Q.S</i> Symbol (altar, lightning, and palm leaf ?) <i>SPECTAVIT</i> Symbol (caduceus, trident, and dolphin ?)
------	--

Bibliography	<i>CIL</i> I <sup>2</sup> 949 <i>ILLRP</i> 997 Herzog 1937, no. 7
--------------	---

158: January 26<sup>th</sup>?

Current Location Presumed lost (*ILLRP* 997)  
Findspot once in Rome (museum of San Gregorio al Celio, *CIL* I<sup>2</sup> 945)  
Material No record  
Length No record  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record  
Drawing Ritschl 1878b, Taf. XXI fig. a



Text *DIOCLES·VECILI*  
*SPECTAVIT*  
*A·D·V·K·FEBR*  
Blank

Bibliography *CIL* I 776 e (suspect or false)=I<sup>2</sup> 945  
Ritschl 1878, no. 70 (considered dubious)  
*ILLRP* 999  
Herzog 1937, no. 13

159: Nones?

Current Location BM (1772,0311.77); LH inspected in 2016

Findspot No record

Material Ivory?

Length 41 mm

Width 9 mm

Height 7 mm

Perforation diameter N/A

Text height 4 mm

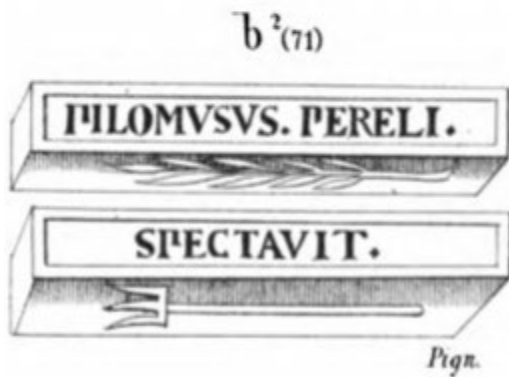
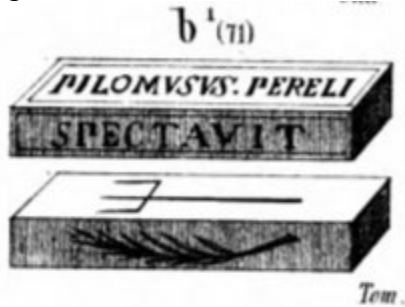


Text *PROTEMVS.FALERI*  
Blank  
*SPECTAVIT*  
*N.S*

Bibliography *CIL* I<sup>2</sup> 946  
*ILLRP* 1000  
Herzog 1937, no. 11

160:

Last known location Once in Rome (*ILLRP* 998)  
Findspot No record  
Material No record  
Length No record  
Width No record  
Height No record  
Perforation diameter No record  
Text height No record  
Drawing Ritschl 1878, Taf. XXI fig. b and b<sup>2</sup>



Text *PILOMVSVS. PERELI*  
Symbol (palm leaf ?)  
*SPECTAVIT*  
Symbol (trident ?)

Bibliography *CIL* I 776 b (suspect or false)=I<sup>2</sup> 950  
*ILLRP* 998  
Herzog 1937, no. 9

161:

Current Location	Hannover (1663); LH inspected in 2017
Findspot	No record
Material	Bone?
Length	51 mm
Width	12 mm
Height	8 mm
Perforation diameter	2 mm
Top Perforation diam.	3 mm
Text height	3 mm
Photographs	Mlasowsky 1991, no. 182



Photograph of top perforation Kestner Museum



Text	<i>AMIANTHUS</i>
	Blank
	Blank
	Blank

Bibliography	Herzog 1937, no. 145
--------------	----------------------

162:

Current Location Vienna (ANSA\_X\_151); LH inspected in 2016  
Findspot Magdalensberg  
Material Bone  
Length 49 mm  
Width 8 mm  
Height 4.5 mm  
Perforation diameter 2 mm  
Text height 3 mm



Text *LICCAIUS.POMPON*  
Blank  
Symbol (concentric circle design and palm leaf ?)  
Symbol (concentric circle design ?)

Bibliography Herzog 1937, no. 2  
*CIL* I² 2714  
*ILLRP* 988

163:

Current Location Klagenfurt (4763); LH inspected in 2018  
Findspot Magdalensberg  
Material Bone with traces of *minimum* on the third side  
Length 54 mm  
Width 10 mm  
Height 6 mm  
Perforation diameter 1.5 mm  
Text height 4 mm



Text *ACASTUS*  
Blank  
*ALBI.Q.S*  
Blank

Bibliography *ILLRP 992*

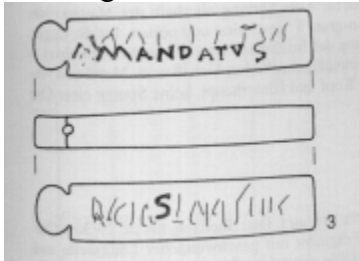


164:

Current Location      Magdalensberg; LH inspected in 2018  
Findspot                Magdalensberg (Gostenčnik 2005, p. 254)  
Material                 Bone  
Length                  50 mm  
Width                  10 mm  
Height                  6 mm  
Perforation diameter 2 mm  
Text height            2-5 mm



Drawing                Gostenčnik 2005, Taf. 59, 3



Text                    *MANDATUS*  
Blank  
*S*  
Blank

Bibliography         Piccottini 1991, no. 233

165:

Current Location     Magdalensberg; LH inspected in 2018  
Findspot             Magdalensberg  
Material              Bone  
Length                50 mm  
Width                 8 mm  
Height                6 mm  
Perforation diameter 1.5 mm  
Text height           4 mm



Drawing

Gostenčnik 2005, Taf. 59, 6



Text

*BONO.POMPO*  
Symbol (ivy leaf ?)  
Blank  
Symbol (palm leaf ?)

Bibliography

Gostenčnik 2005, p. 354 no. 6 and Taf. 59, 6

166:

Current Location      Magdalensberg (M5566); LH inspected in 2018  
Findspot                Magdalensberg  
Material                 Bone  
Length                  55 mm  
Width                    12 mm  
Height                  5 mm  
Perforation diameter  2 mm  
Text height            2-3 mm



Drawing                      Gostenčnik 2005, Taf. 59, 5



Text                        *L.STLACCIUS/ L.F.SECUNDUS*  
Blank  
Blank  
Blank

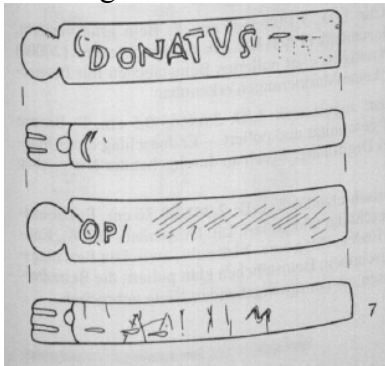
Bibliography            Piccottini 1991, no. 234

167:

Current Location     Magdalensberg (VI/85); LH inspected in 2018  
Findspot             Magdalensberg  
Material              Bone  
Length                55 mm  
Width                 10 mm  
Height                7 mm  
Perforation diameter 2 mm  
Text height           3-4 mm



Drawing              Gostenčnik 2005, Taf. 59, 7



Text                    *DONATUS*  
Blank  
*OP[?]*  
Graffiti ?

Bibliography        Piccottini 1991, no. 235

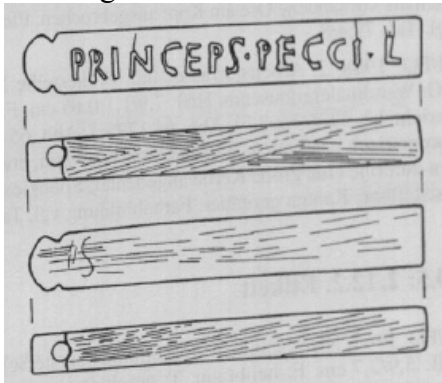


168:

Current Location     Magdalensberg (SH/9C); LH inspected in 2018  
Findspot             Magdalensberg  
Material              Bone  
Length                57 mm  
Width                 8 mm  
Height                6 mm  
Perforation diameter 2.5 mm  
Text height          4-5 mm



Drawing              Gostenčnik 2005, Taf. 59, 4



Text                    *PRINCEPS.PECCI.L*  
Blank  
Blank  
Blank

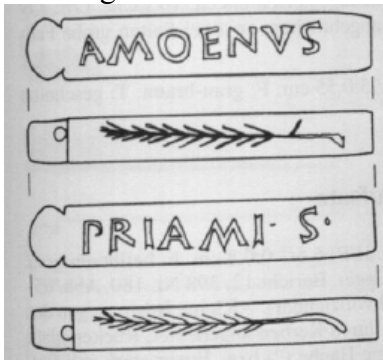
Bibliography        Piccottini 1991, no. 235

169:

Current Location      Magdalensberg (1985 19.8); LH inspected in 2018  
Findspot                Magdalensberg  
Material                Bone  
Length                 49 mm  
Width                  8 mm  
Height                 5.5 mm  
Perforation diameter 1.5 mm  
Text height            4 mm



Drawing                Gostenčnik 2005, Taf. 59, 1



Text                    *AMOENUS*  
                            Symbol (palm leaf ?)  
                            *PRIAMI·S*  
                            Symbol (palm leaf ?)

Bibliography         Piccottini 1991, no. 237

170:

Current Location     Magdalensberg (AA38); LH inspected in 2018  
Findspot             Magdalensberg (2009)  
Material             Bone  
Length                54 mm  
Width                 10 mm  
Height                8 mm  
Perforation diameter 2 mm  
Text height          4 mm



Text                    *LAETUS.PECCILS*  
                          Blank  
                          *AC...SERVUS*  
                          C[I]

Bibliography          Piccottini 2013, 9-18  
                          *Annona* 2015, n. 35  
                          AE2013.1174 a-c

171:

Last known location Zuglio? (Inv. 105.358)  
Findspot Iulium Carnicum, area NW of the forum near a Republican temple  
(Mainardis 2001, p. 165)  
Material Bone  
Length 42 mm  
Width 10 mm  
Height 6 mm  
Perforation diameter 8 mm  
Text height 4-6 mm  
Photo Mainardis 2001, p. 165 fig. 2



Text *T.SEX.F*  
Blank  
*AS*  
Blank

Bibliography Mainardis 2001, p. 165-166 fig. 2



172:

Last known location Zuglio? (Inv. 105.359)

Findspot Iulium Carnicum, area in between the forum and the basilica (Mainardis 2001, p. 168)

Material Bone

Length 43 mm

Width 7 mm

Height 6 mm

Perforation diameter No record

Text height No record

Photo Mainardis 2001, p. 167 fig. 3



Text *URBANUS*  
Blank  
*DEC*  
Blank

Bibliography Mainardis 2001, p. 167-169 fig. 3

173:

Current Location	Aquileia (48029); LH inspected in 2017
Findspot	Aquileia
Material	Ivory
Length	64 mm
Width	11 mm
Height	9 mm
Perforation diameter	1.5 mm
Text height	3 mm



Text	<i>SECUN[...]</i> <i>PU[DE]NS</i>
	Symbol (palm leaf ?)
	Blank
	Symbol (palm leaf ?)

On the first side, Zaccaria has proposed a reading of *SECUN[...]* *PUDENS*. I could not read the *DE* on the second line.

Bibliography	Zaccaria 1992, no. 49
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174:

Current Location	No record (Inv. 105.359)
Findspot	Ostra (Cinti 2005, p. 295-298)
Material	Bone
Length	50 mm
Width	10 mm
Height	No record
Perforation diameter	No record
Text height	No record
Photo	Cinti 2005, p. 296, fig. 1



Text	Blank ? Symbol (lightning ?) <i>SPECTAVIT</i> Symbol (burning altar ?)
------	---

Bibliography	Cinti 2005, p. 295-298, fig. 1
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175:

Current Location BM (1772,0311.5); LH inspected in 2016  
Findspot No record  
Material Bone  
Length 47 mm  
Width 10 mm  
Height 55 mm  
Perforation diameter N/A  
Text height 6 mm

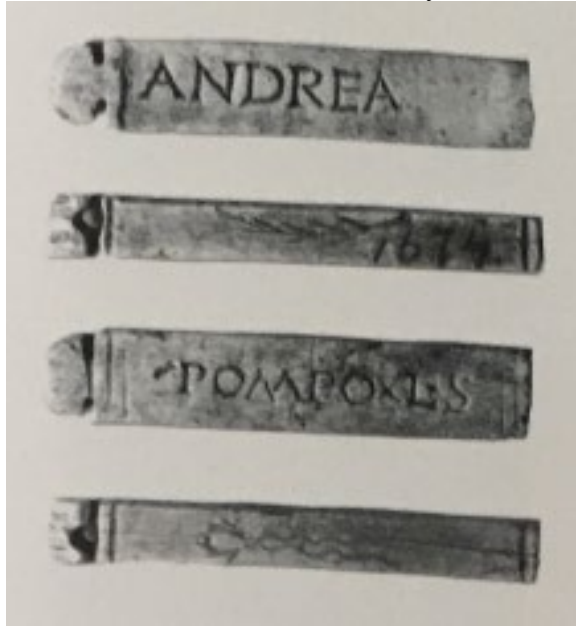


Text *PILONNOVI*  
Blank  
Blank  
Blank

Bibliography *CIL* I<sup>2</sup> 2716  
*ILLRP* 989

176:

Current Location     Hannover (1674); LH inspected in 2017  
Findspot             No record  
Material             Bone/ Ivory  
Length                46 mm  
Width                 9 mm  
Height                5 mm  
Perforation diameter 3 mm  
Text height          3-4 mm  
Photo                 Mlasowsky 1991, no. 174

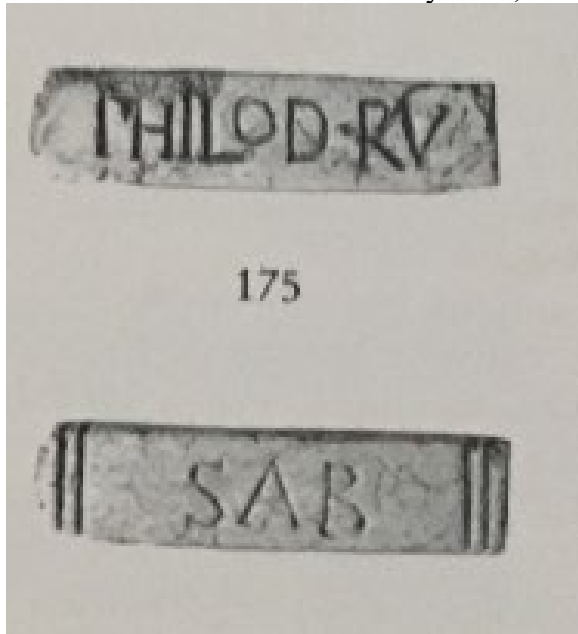


Text                    *ANDREA*  
                          Symbol (palm leaf?)  
                          *POMPOLES*  
                          Symbol

Bibliography          Herzog 1937, no. 1  
                          *CIL* I<sup>2</sup> 2713  
                          *ILLRP* 987

177:

Current Location	Hannover (1672); LH inspected in 2017
Findspot	No record
Material	Bone
Length	40 mm
Width	10 mm
Height	4 mm
Perforation diameter	N/A
Text height	4-6 mm
Photo	Mlasowsky 1991, no. 175



Text	<i>PHILOD.RU</i>
	Blank
	<i>SAB</i>
	Blank

Bibliography	Herzog 1937, no. 5 <i>CIL</i> I <sup>2</sup> 2717 <i>ILLRP</i> 990
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178:

Current Location PP (Dutuit 232); LH inspected in 2016  
Findspot Tarracina (Froehner 1901, no. 218, Herzog 1937, no. 3)  
Material Ivory stained green  
Length 45 mm  
Width 8 mm  
Height 3 mm  
Perforation diameter 3 mm  
Text height 4 mm



Text *STATIS.CLOIL.C*  
Symbol (concentric circle?)  
*S*  
Symbol (concentric circle ?)

Bibliography Herzog 1937, no. 3  
*CIL* I<sup>2</sup> 2715  
*ILLRP* 991

179:

Current Location BNF (Froehner 39); LH inspected in 2017  
Findspot acquired in Rome (1909, Froehner vol. 10, p. 501)  
Material Bone  
Length 60 mm  
Width 12 mm  
Height 8 mm  
Perforation diameter 2 mm  
Text height 2 mm



Text *C[N]...M*  
?  
?  
?

Bibliography Babelon 1928, no. 43



180: Kalends (1<sup>st</sup>) July

Last known location Antiquarium museum (*CIL* I 758)

Findspot No record

Material No record

Length No record

Width No record

Height No record

Perforation diameter No record

Text height No record

*VIRIUS.CAESII*

*BASSUS*

*SP.K.IUL*

*APRONIO*

Bibliography *CIL* I 758 (suspect)

181:

Current Location Rimini (#1); LH inspected in 2017  
Findspot Ariminum  
Material Bone  
Length 38 mm  
Width 8 mm  
Height 5 mm  
Perforation diameter N/A  
Text height 3 mm  
Photo Donati 1981, Tav. XVI

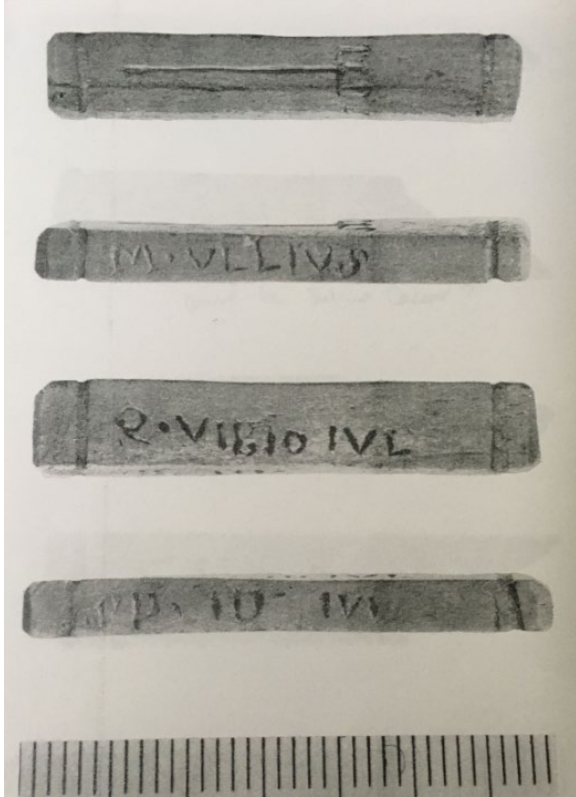


Text *APOLO*  
*SP.K...*  
*T.FAUST...*  
*C.RUTILLI...*

Bibliography *AE* 1981.379b  
Donati 1981, p.145-149 (suspect)

182:

Current Location Rimini (#2); LH inspected in 2017  
Findspot Ariminum  
Material Bone  
Length 35 mm  
Width 6 mm  
Height 4 mm  
Perforation diameter N/A  
Text height 2 mm  
Photo Donati 1981, Tav. XVII

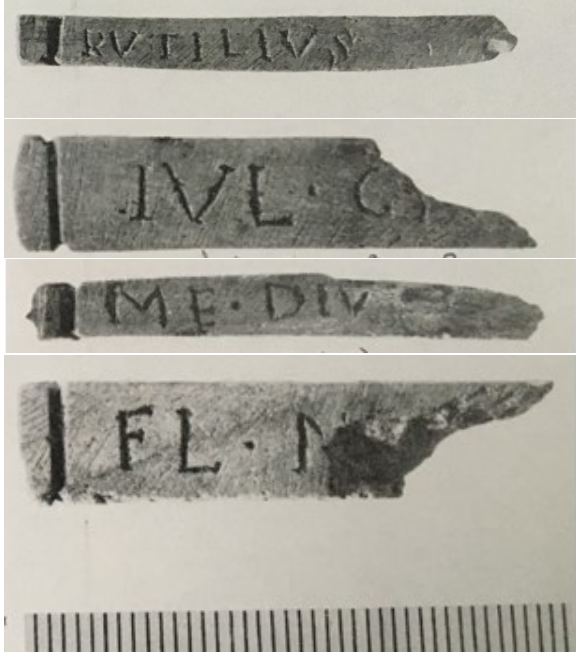


Text Symbol (trident ?)  
*M·ULLIUS*  
*Q·VIBIO IUL*  
*SP·ID IUL*

Bibliography *AE* 1981.379a  
Donati 1981, p.145-149 (suspect)

183:

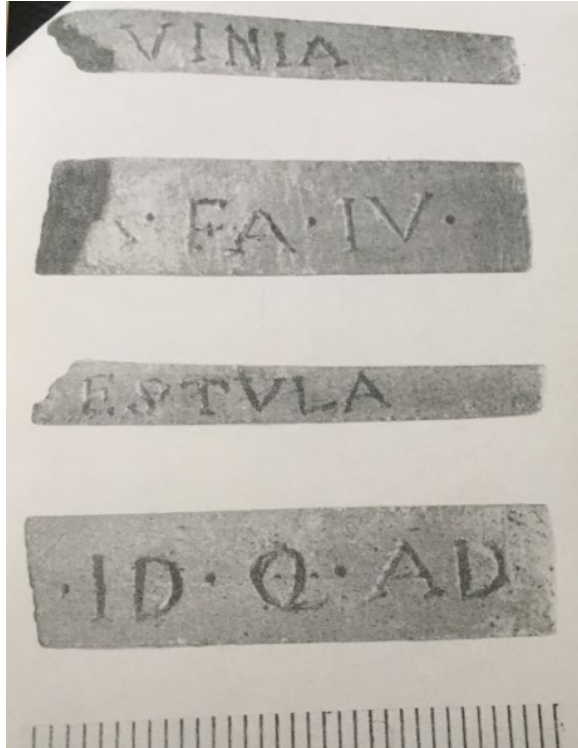
Current Location Rimini (#3); LH inspected in 2017  
Findspot Ariminum  
Material Bone  
Length 40 mm  
Width 9 mm  
Height 5 mm  
Perforation diameter N/A  
Text height 2-4 mm  
Photo Donati 1981, Tav. XVIII



Text *RUTILLIUS*  
*IUL·C...*  
*ME·DIUS...*  
*FL·M...*

Bibliography *AE* 1981.379c  
Donati 1981, p.145-149 (suspect)

184:  
 Current Location Rimini (#4); LH inspected in 2017  
 Findspot Ariminum  
 Material Bone  
 Length 33 mm  
 Width 8 mm  
 Height 4.5 mm  
 Perforation diameter N/A  
 Text height 3-4 mm  
 Photo Donati 1981, Tav. XIX



Text *VINIA*  
*FA.IV*  
 ...*ESTVLA*  
 ...*ID.Q.AD*

Bibliography *AE* 1981.379d  
 Donati 1981, p.145-149 (suspect)

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