

# EARLY ITALIAN SIGILLATA

The chronological framework and trade patterns  
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# Ateian sigillata and import-export activities in north Etruria

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The Ateian sigillata production was the principal feature of the north Etruscan economy and certainly one of the more important in the history of Roman pottery. It was not by chance that this phenomenon arose in the Arno valley, a fruitful region, rich in agricultural resources and raw materials (ores, clay, timber), being the necessary requirements for several manufacturing activities. The *Arnus* and *Tiber* rivers and their main affluents were navigable in Roman times and permitted the rapid conveyance of men, raw materials, foodstuffs and artifacts<sup>1</sup>.

As far as pottery is concerned, black-glazed ware was produced in Arezzo from the fourth century BC onwards. Between the end of the second and the first half of the first centuries BC, the north Etruscan black-glazed pottery Campana B enjoyed a wide distribution, both northwards (Po Valley, Magdalensberg) and along the Mediterranean coasts<sup>2</sup>. Clearly, north Etruscan terra sigillata arose from a sound productive tradition and within an active trade system. Nevertheless, its origin and success were mainly due to political events.

According to L. Pedroni<sup>3</sup>, in the first historical phase of arretine sigillata the stamps belonged to men such as *Q. Afranius* and *C. Septimius*, linked to *Pompeius*. Thanks to the victorious campaigns in the eastern Mediterranean, between 67 and 62 BC, money, skilled slaves and a new technology (i.e. indirectly heated kilns) were imported to Etruria. After the defeat of the Pompeians, the estates and the workshops changed owners and political events favoured the followers first of *Caesar* and then of *Octavianus*. The close relationship between politics and ceramic production is clear as far as Ateian ware is concerned. On the grounds of epigraphic evidence<sup>4</sup>, the *Ateii* were of Etruscan origin and, specifically, their roots were in Valdichiana, the territory of which was divided between Arezzo and Chiusi during the Roman period. It is very likely that there were close family links between the potter *Cn. Ateius* and *Cn. Ateius Capito*, who was the grandson of a centurion of Sulla<sup>5</sup>. In 17 BC he celebrated the *ludi saeculares* with Augustus<sup>6</sup>, in AD 5 he became *consul suffectus*<sup>7</sup> and in AD 13 *curator aquae* in Rome<sup>8</sup>. I would like to stress the relationship between Ateian terra sigillata and political power because I believe this link

strongly conditioned the mechanisms of production and trade of this ware.

At present, the oldest Ateian workshop is the one discovered in Arezzo, in Nardi street<sup>9</sup> datable to the last decade (or surely the last 15 years) BC. Based on archaeometrical and archaeological evidence, other Ateian workshops were doubtless present in Arezzo. Indeed, only 73 stamps found outside Arezzo can reasonably be associated with the Nardi Street workshop<sup>10</sup>. Of these stamps, 24 were found in Rome. At least some were traded via the Tiber river. Other stamped pieces produced in Nardi street flowed with the Arno down to the Pisan ports, from whence they were widely traded to Ephesos in the east, *Noevasium* in the north and even beyond the Empire's frontiers (e.g. Es-Saouira in the coast of central Morocco).

Ateian kilns were moved from Arezzo to the sea-town of Pisa, in order to increase the already established trade activities. Four workshops have been discovered in *Pisae* (San Zeno and San Stefano street) and in the *ager Pisanus* (Isola di Migliarino and Poggio Fiori)<sup>11</sup>. Many other kilns remain unidentified<sup>12</sup>. Until now, the oldest Ateian workshop found in Pisa was identified in San Zeno Street, where production and trade began in the last years of the first century BC. According to P.M. Kenrick, the San Zeno Street deposit immediately succeeded that of Nardi Street<sup>13</sup>: archaeometrical analyses carried out at *Saintes (Mediolanum Santonum)* confirmed that Arretine was replaced by Pisan sigillata during the last decade BC<sup>14</sup>.

Forms and stamps of the Pisan and Arretine Ateian workshops are well known by now<sup>15</sup>. In a next step, we will attempt to delineate the distribution of their products into the Neronian period, represented by the last potters (*Cn. Ateius Mahes* and *Cn. Ateius Arretinus*)<sup>16</sup> and constituting the *trait d'union* with the Late Italian ware. We will consider Ateian sigillata in different contexts (economical, political and geographical) of distribution. In fact, this ware was involved in numerous exchange mechanisms: it was distributed in both military and civilian markets; in several geographical areas (the western and eastern Mediterranean basin, as well as countries beyond the borders of the Empire) and in various political and social contexts (*oppida, vici, civitates, coloniae*).

## THE MILITARY MARKET

Ever since S. Loeschke's studies<sup>17</sup>, the link between Ateian sigillata and the Augustan military campaigns has long been noted. The distribution maps published by E. Ettliger in 1962<sup>18</sup> showed a wide distribution of Ateian sigillata in the *castra* located along the Rhine-Danube *limes* and archaeometrical analyses indicated that the tableware mostly originated from Pisa.

Useful quantitative data are available from Haltern and *Novaesium*. In the former site, Ateian sigillata represented 44% of the total of the stamps found, with 30% from Pisa and 14% from Lyon<sup>19</sup>. At *Novaesium*, of the 611 identified stamps, 196 (32%) were Ateian, with 10 stamps from Arezzo, 165 from Pisa and 21 from Lyon<sup>20</sup>. Along the German *limes* Ateian ware continued to be popular in the post-Augustan period as well. Ateian stamps still constituted 18% of the total in the Roman military settlement at Velsen, datable to 20-55 AD<sup>21</sup>.

Indeed, only close links with the Augustan ruling class can explain the success of Ateius in the *annona militaris*, for which he was entrusted with many contracts. The Ateian distribution network was efficient and detailed, ready to comply with all market requirements. S. Loeschke<sup>22</sup> suggested that Ateius' firm produced wholesale for the Roman army in Germany and that it had its own distribution network. Ateius did not sell through middlemen, whereas other potters had to. In order to supply the military markets *Cn. Ateius* planned to get closer to the German *limes*, by setting up branches at la Graufesenque, perhaps at Jonquières and at Lionne<sup>23</sup>. As stressed by C. Wells, Lyon had a very important role in Roman politics because it was the seat of the mint which was producing coinage to pay the Rhine army<sup>24</sup> and it may be very likely that pottery and coins used the same supply routes.

In the early decades of the Roman occupation the legionaries were not completely self-sufficient. Their needs were various, from vessels to grain (when the local harvests proved inadequate), olive oil, wine, weapons, blankets and cloaks<sup>25</sup>. Along with terra sigillata many of these goods could have been sent from north Etruria to the German *limes*, as shown, for instance, by the finding in *Augusta Raurica* and perhaps *Aventicum* of Dressel 2-4 amphorae produced in the coastal *ager Volaterranus*, in the Mazzanta workshop<sup>26</sup>. Most likely weapons were sent to the *limes* from Arezzo. Its metalworks were renowned since the sixth century BC<sup>27</sup> and in 205 BC the town had supplied Scipio with an enormous quantity of weapons<sup>28</sup>.

The Arretine mountains and hills were rich in iron and copper mines, which were exploited during the Triumviral and Augustan periods<sup>29</sup>. North Etruria had a grain production considerable in quantity and quality<sup>30</sup>. In 205 BC Scipio was supplied by *Volaterrae* and *Arretium* with grain<sup>31</sup>. *T. Caesius Primus* bought grain in Umbria and Tuscany in the first half of the second century AD to be resold in the urban market<sup>32</sup>. In this way, the Arno valley had the possibility of supplying grain, ceramics, wine and weapons to the Roman soldiers. This multi-productivity of the Arno valley, the convenience of transport and, last but not least, the Augustan support, may explain the economic success of Ateian terra sigillata on the German *limes*.

Obviously terra sigillata was not confined to Roman army<sup>33</sup>. To the north of the Alps, Ateian sigillata first reached the army and then became available on the civilian market as well. In northern Gaul, F. Hanut (this volume) stressed the peak of Ateian imports in 5/10-20/25 AD, in both the civilian and military markets, while before they had always been linked to a Roman military presence. As expected, these imports reached more urban settlements than rural sites.

The relationship between Roman conquests and the trade in Ateian ware can also be observed in *Britannia*, where vessels stamped by *Cn. Ateius* and *Chrestus* have been found in deposits of the Claudian period, as at *Noviomagus Regnensium* (Fishbourne)<sup>34</sup>. However, before AD 43, Ateian pottery had already reached *Britannia*, as is shown by the Silchester<sup>35</sup> and Colchester<sup>36</sup> excavations. In the latter site, Italian sigillata constituted 16% of the total (332 stamps) and Ateian sigillata represented 11%<sup>37</sup>. This percentage is undoubtedly lower than along the German *limes*, but it is by no means insignificant<sup>38</sup>.

## THE CIVILIAN MARKET

Besides supplying the army, Pisan/Arretine sigillata enjoyed a wide circulation in the free market along the Mediterranean coasts and beyond. Fulford stressed the correlation between agriculturally prosperous regions and the production of pottery serving a wide market<sup>39</sup>. As we have seen, the Arno valley was renowned for the quality and yield of its cereals. Wine production is well documented from the Archaic to the late Roman period. Manufactured goods such as weapons could be exported. Timber from Pisae and marble from Luna were other materials of notable economic importance which sustained the commercial flow to Rome<sup>40</sup>. Therefore, Ateian sigillata may be involved in many

exchange mechanisms: its distribution can be used to delineate some Mediterranean patterns of exchange.

### *The western Mediterranean*

Etruscan traffic was mainly aimed at the western Mediterranean, as shown by imports found along the coasts during surveys and excavations<sup>41</sup>.

Gallia had been the preferred market since the beginning of Ateian export from Arezzo and Pisa. The Etruria-southern Gallia trade followed tradition: north-Etruscan sigillata entered into already sound exchange mechanisms<sup>42</sup>. This pottery is very common in the Gaulish *oppida*<sup>43</sup>: it was a kind of status symbol for the local aristocracy, who bought the Italian vessels by selling wool, hides, metals and slaves. The coastal harbours (especially *Narbo Martius*), a good fluvial network (based on the *Rhodanus* and *Garumna* rivers) and the road system vastly improved by Agrippa allowed a convenient distribution of the Pisan ware. At *Mediolanum Santonum* Ateian ware is present with 91 stamps of 191 (= 48%). Of these, 45 stamps have been analysed: 37 turned out to be from Pisa, 3 from Arezzo and 7 from indeterminate zones in Italy<sup>44</sup>. Concerning *Glanum*, 605 stamps have been published, dated from the Augustan period up to the end of the first century AD<sup>45</sup>. Italian sigillata, with 170 items, forms 28% of the total. The Ateian ware, with 58 stamps, constitutes 34% of Italian sigillata and 9.5% of the ware accumulated at *Glanum* during a period of nearly 120 years. Instead, at Saint-Romain-en-Gal, Pisan imports are not common<sup>46</sup>. Evidently the eastern Gaulish markets no longer received the ware because of the activity of the Ateian branch in Lyon. Following the same western sea routes, Ateian sigillata was distributed along the Iberian coasts and inland, obviously taking advantage of the river valleys and the main road system. Many shipwrecks identified in the North Tyrrhenian sea give evidence of the great volume of traffic between north Etruria and the Iberian peninsula. The commercial flow occurred along the Iberian and Gaulish coasts and through the Baleari, Capo Corso and the Arcipelago Toscano sea route. Great quantities of Spanish *garum* and olive oil were traded along the Tyrrhenian coasts, while ships headed for Rome. Wines from *Baetica* and *Tarracensis* were exported as well; metals, fruits and honey were other products which could arrive from the Iberian peninsula<sup>47</sup>. At Tossal de Manises (País Valencià), among the terra sigillata dated to the first two centuries AD (426 stamps), 124 items (= 29.1%) were from Arezzo/Pisa. Ateian Ware, with 45 stamps,

formed 36.3% of the Italian imports and 10.5% of the entire body of sigillata<sup>48</sup>. To this percentage 48 stamps (= 11.26%) of Pisan Late Italian potters can be added. Nearly 22% of the terra sigillata reaching this site came from northern Etruria. Italian sigillata makes up 61.5% of the sigillata deposited in the Museo Arqueológico de Ibiza (in all 169 stamps)<sup>49</sup>. North-Etruscan Ateian ware, with 20 items, forms 12% of the total amount of terra sigillata, to which can be added 11 Late-Italian stamps (= 6.5%). More or less similar percentages have been recorded in several sites along the Iberian coast<sup>50</sup>, whereas the Ateian ware is scarcer inland, as shown, for example, by the rare vessels found at Numancia<sup>51</sup>. Pisan ware reached *Conimbriga* as well<sup>52</sup>, probably from Mediterranean coasts through the *Tagus* river<sup>53</sup>: however, the quantity of Ateian imports is scarce (12 stamps on 238 found, equalling 5%), peaking in the Tiberian period<sup>54</sup>.

We know the situation in western North Africa (*Mauretania*, *Numidia* and *Africa Proconsularis*) thanks to the papers of R. Guery and P. Kenrick<sup>55</sup>. Vessels stamped by the *Ateius* group were found in this region (52 stamped pieces on 926, or 5.6%). To this percentage 30 stamps of the Pisan potter *Valerius Volusus*<sup>56</sup> and 93 of the Late Italian potters can be added. On the whole the Pisan imports reached 19%. Obviously, Italian sigillata was very popular at Cherchell<sup>57</sup>, the Roman Caesarea of Giuba II. In the last decades of the first century AD, Late Italian vessels were sent along these sea-routes as military supply to veterans settlements in *Mauretania* and *Numidia*<sup>58</sup>.

### *The eastern Mediterranean*

Ateian terra sigillata reached the main coastal towns in the eastern Mediterranean, but in much lower quantities than in the west. At Corinth, for example, whose commercial importance is undoubted<sup>59</sup>, Ateian sigillata shows insignificant percentages in comparison to the German *limes*<sup>60</sup>. In the early first century AD Italian sigillata was the primary imported fine ware found, sometimes surpassing in quantity even the locally made fine ware, and Arezzo supplied 79.5% of the Italian sigillata<sup>61</sup>. Even so, and not only for chronological reasons<sup>62</sup>, Ateian ware arrived at only 2.6% (18 stamps of 700); the Late Italian potters (the *Murrii* and *L. Rasinius Pisanus*) are recorded by the same rate (18 stamps)<sup>63</sup>. Evidently, the rich market of the *Colonia Laus Iulia Corinthiensis* shows a remarkable diversification of sigillata sources: more than 26 shops were involved, and not all were among the largest at

Arezzo. Most likely this pottery was imported for resale, and in this private exchange the Ateian pottery was a minority. Concerning Ephesos, Italian sigillata has been found in a moderate quantity<sup>64</sup>: in the second edition of the CVA<sup>65</sup> Pisan sigillata reached 3.45%, while the Arezzo/Pisa/Lyon tableware comprises 3.45%.

Therefore, in the eastern Mediterranean Ateian sigillata was not a great commercial success. I think, along with E. Ettliger<sup>66</sup>, that its presence was linked primarily to the grain trade to Rome. After reaching Ostia, part of the Ateian pottery went on to Rome<sup>67</sup>, and part traveled out of Italy southeastward in the holds of the grain ships as a part of the return cargo. Obviously, the grain supply to Rome influenced the movement of goods in general, exerting what Rickman defined as a gravitational pull<sup>68</sup>. Augustus gave the *praefectus annonae* the task of coordinating, stimulating and checking upon all the grain imports to Rome. However, the grain trade was run by private enterprises, by *mercatores*, *negotiatores* and above all by the shipowners, *navicularii*<sup>69</sup>. Private and state trade were closely intertwined.

As is well-known, the main grain routes were Alexandria-Rome<sup>70</sup> and Carthago-Alexandria-Rome<sup>71</sup>. A direct route was probably taken from Rome to Alexandria, whereas the journey to Rome was an indirect one: from Cyprus, to the southern coasts of Asia Minor and then westwards to Crete, Sicily and the west coast of Italy. Puteoli was the most important harbour along the Southern Tyrrhenian coast, and in fact in this area Ateian sigillata from Pisa was so popular that an Ateian branch is assumed to have been located in Campania<sup>72</sup>. Not by chance, at Alexandria, Italian sigillata constituted the majority of the fine wares and Ateian sigillata is well represented with the stamps of *Cn. Ateius*, *Cn. Ateius Mahetis*, *Cn. Ateius Euhodus* and *Zoilus*<sup>73</sup>. The rare Ateian finds along the Syrian-Palestinian coast (Antioch-on-the-Orontes<sup>74</sup>, Oboda<sup>75</sup>) can be linked to this grain route. Imports from Northern Etruria are rare in Crete<sup>76</sup>, while different percentages are recorded at Paphos, where, evidently for chronological reasons, a large quantity of Pisan Late Italian Sigillata was found (mostly *Lucius Rasinius Pisanus*: 24 stamps on 32)<sup>77</sup>. Finds are much more numerous in Sicily<sup>78</sup>, as this island was also involved in the sea route Rome-Carthago.

The Ateian terra sigillata found at *Chersonesos*<sup>79</sup>, in the Bosphoran district supplies evidence for another grain route, linking the Black sea and Greece. As Kathleen Warner Slane showed, this trade route passed through Corinth<sup>80</sup>. Ateian sigillata found at Smyrna<sup>81</sup>

and Ephesos<sup>82</sup> probably should be seen in this context as well.

The rare arrivals of eastern sigillata in the north Etruscan market during early imperial times attest these east-west trade mechanisms<sup>83</sup>. Eastern wine (in Dressel 43 and Agora 197 amphoras), Greek marbles and Egyptian porphyry reached the north Etruscan market too<sup>84</sup>. Slaves arrived from the east in great quantities and they were undoubtedly put to work in the Pisan workshops and in the marble quarries of Luni<sup>85</sup>. Luxury imports (papyrus, silk, spices, glass, purple, incense, perfumes, linen clothes, gems, pearls)<sup>86</sup> have become archaeologically invisible, but filled the holds of the ships going westwards.

As far as north Africa is concerned Ateian sigillata was well distributed both along the Rome-Carthago sea route, with a large amount of evidence along the Sicilian<sup>87</sup> and Sardinian<sup>88</sup> coasts, at Carthago<sup>89</sup>, and along the Carthago-Alexandria sea route. Concerning the Libyan coast, Ateian terra sigillata has been found at Sabratha<sup>90</sup>. Only 5 stamps are Ateian on 107 items, dated from ca. 10 BC to Domitian's reign (= 4.6%). Pisan presence increased in the following decades: Late Roman potters (mostly *L. Rasinius Pisanus*, once more) exceeded 10%. Ateian ware has been found at Leptis Maior<sup>91</sup>. Italian terra sigillata found at Berenice/Benghazi reached 45% in first century AD deposits. It was imported in significant quantities mostly from the Tiberian period onwards<sup>92</sup>. Ateian ware forms 32.3% of the total of Italian sigillata (105 stamps) and Late Italian potters constitute 10.4%<sup>93</sup>. Obviously, Tunisian and Tripolitanian products (olive oil and *garum* amphoras, terra sigillata, coarse pottery, lamps) are common along the Tyrrhenian coast and in the northern Etruscan market, with percentages which became enormous from the second/third century AD onwards<sup>94</sup>.

#### *Ateian sigillata beyond the empire's frontiers: the luxury trade*

Ateian ware has even been found beyond the empire's frontiers, clearly related to the luxury market. Even if terra sigillata was not likely to be a trade item in so far away regions, it is a very important index of the personnel and shipping points involved in these market mechanisms. We can see that north Etruscan harbours (via Ostia and Puteoli) took part in this long distance exchange.

The Ateian terra sigillata found at Mogador (the present Essauira, along the Atlantic coast of Morocco) can be linked to a caravan route going southwards.

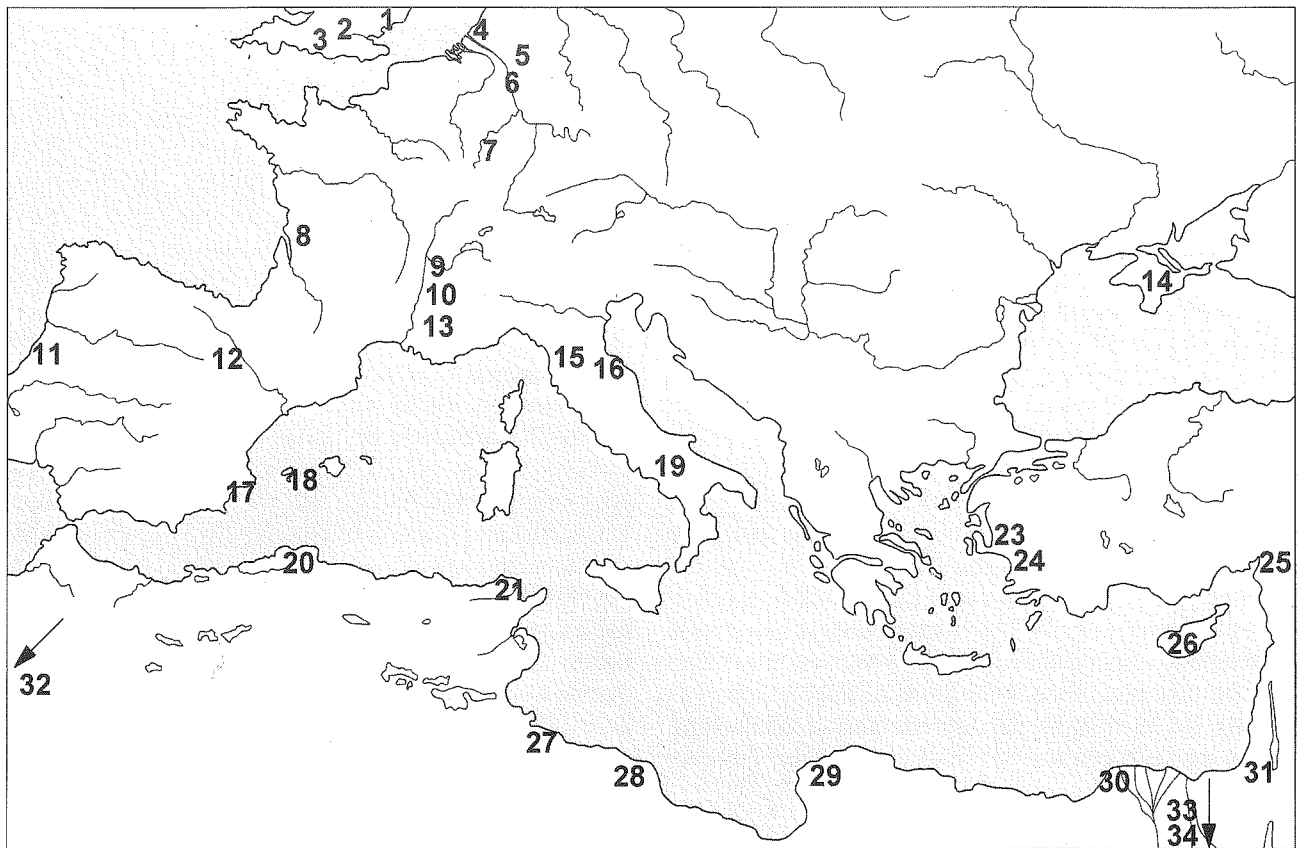


Fig. 1. Sites mentioned in the text: 1. Silchester-Colleua; 2. Colchester-Camulodunum; 3. Fishbourne-Noviomagus Regnensium; 4. Velsen; 5. Haltern; 6. Neuss-Novaesium; 7. Metz-Divodurum; 8. Saintes-Mediolanum Santonum; 9. Lyon; 10. Saint-Romain-en-Gal; 11. Coimbra-Conimbriga; 12. Numancia; 13. Glanum; 14. Chersonesos; 15. Pisa; 16. Arezzo; 17. Tossal de Manises; 18. Ibiza; 19. Pozzuoli-Puteoli; 20. Cherrchell-Iol Caesarea; 21. Carthage; 22. Corinth; 23. Smyrna; 24. Ephesos; 25. Antioch-on-the-Orontes; 26. Paphos; 27. Leptis Maior; 28. Sabratha; 29. Benghazi-Berenike; 30. Alexandria; 31. Oboda; 32. Mogador; 33. Coptos; 34. Berenike.

This region supplied the Roman market with slaves, wild animals for the amphitheatre, ivory and *citrus*, the precious tuia wood, typical of the Essauira region and used for making the inlaid tables beloved by the Roman upper class<sup>95</sup>.

The Italian and Late Italian sigillata finds along the Tripolitanian and Cyrenaic coasts may be indices of caravan routes going south towards the Oasis<sup>96</sup>. Sabratha, for example, was located at the juncture of a caravan route along which ivory, ostrich feathers and perhaps gold were brought from the centre of Africa<sup>97</sup>.

As for the Ateian ware found on the *Pontus Euxinus*<sup>98</sup>, besides the grain route, it may be related to the central Asian silk route linking the Mediterranean world with China<sup>99</sup>.

At the moment, the most remote site where Ateian ware has been found is Arikamedu in southeastern India. Comfort published a *Consp. 22* form stamped by *Euhodus*<sup>100</sup> who was an *Ateius* worker in the Isola di Migliarino workshop. It is dated to the early Tiberian period (perhaps 20 AD)<sup>101</sup> and the archaeometrical analyses carried out on the cup confirmed a Pisan origin. Other stamped vessels reached Arikamedu originating from Lyon (1), Puteoli (1) and central Italy (2). Most probably, western sigillata arrived in India from Alexandria via the Red Sea, as shown by the Coptos and Berenice finds, where Italian sigillata comprised an high percentage in the Tiberian period<sup>102</sup>. Obviously, the ware was not a trade article in India<sup>103</sup>. According to Comfort the use of sigillata was essentially restricted to the *Conventus*

Romanorum comprising Roman citizens and freedmen supervising the east-west commerce<sup>104</sup>.

#### NORTHERN ETRURIA AND ATEIAN WARE

Terra sigillata constitutes the best archaeological evidence for reconstructing the volume of traffic from northern Etruria. The other commodities, in fact, were perishable (grain, timber, metals) or difficult to determine (e.g. unstamped wine amphoras).

The bulk of exports from north Etruria was aimed the German *limes*. The successful initial phase of the Ateian production surely was due to Augustan support and it was carried out by careful economic planning which provided the sharing of the markets, both military and civilian. *Pannonia* and *Noricum*, for example, had very rare contacts with Ateian ware, as they were supplied by other Arretine workshops and by north Italian, Gaulish and eastern potters<sup>105</sup>. Anyway, political support was addressed to a sound economic phenomenon: the Ateian ware became part of the north Etruscan trading networks already functioning in the Archaic period and lasting into the sixth century AD. Especially in the Tiberian

period, Ateian sigillata enjoyed a widespread circulation in the Mediterranean and prepared the markets for the Pisan Late Roman potters.

Ateian sigillata was involved in all major exchange mechanisms of the Roman economy. It was linked to both civilian and military markets, by short distance trade, and along the grain and exotic trade routes, with the private and state trade. It was handled by both the great *navicularii* and the petty traders who hawked their retail goods from port to port and inland, when rivers and a good road system were in place.

Who brought Ateian sigillata in the civilian market? Surely the members of Italian communities (*mercatores, publicani, coloni*), for evident reasons. The local aristocracy in the *oppida* and *vici* of western Europe, whose Roman items offered a new way of expressing (and thereby preserving) their status<sup>106</sup>. The rising middle class in the *civitates* along the Mediterranean coasts did as well, due to social pressure and the desire for Italian styled artefacts. As Augustan civilization conquered the world ceramologically as well militarily, politically and spiritually, northern Etruscan potters got their fair share.

#### NOTES

<sup>1</sup> Pasquinucci and Menchelli in press.

<sup>2</sup> See in general: Frontini and Grassi 1998.

<sup>3</sup> Pedroni 1995.

<sup>4</sup> Sangriso 1998, footnote 21.

<sup>5</sup> Tacitus, *Ann.* III, 75; Sangriso 1998.

<sup>6</sup> Zos. II, 4, 2.

<sup>7</sup> Degrassi 1952, 6.

<sup>8</sup> Fron., *De aquaeductu*, 102.

<sup>9</sup> Kenrick 1997a, 179-195.

<sup>10</sup> Kenrick 1997a, 183-184.

<sup>11</sup> Menchelli 1994; Menchelli 1995; Cherubini and Del Rio 1997.

<sup>12</sup> Besides the Ateian and Late-Italian workshops, many other potters have been indicated as Pisan by archaeometric analyses (*Aemil. Felix; P. Atti; Mani Avilli; Ones; Philero; Secundi; Suavis; M. Valeri; On. Aquilli*: see von Schnurbein 1982, 140-144, list 1). Their stamps are not very common in Pisan-Volaterran territories. On the contrary, other potters (*C()* *H()* *Fes.* and *S()* *H()* *Fes.*) whose products were not involved in long-distance trade are well represented (Menchelli 1995).

<sup>13</sup> Kenrick 1997a, 185-186.

<sup>14</sup> Tilhard *et al.* 1992, 231-254.

<sup>15</sup> Kenrick 1997a; Menchelli 1997.

<sup>16</sup> As shown by the urban stratigraphies (Rizzo 1994, 257-275).

<sup>17</sup> Loeschke 1909.

<sup>18</sup> Ettliger 1962.

<sup>19</sup> von Schnurbein 1982, 16.

<sup>20</sup> Ettliger 1983.

<sup>21</sup> Glasbergen and van Lith 1977.

<sup>22</sup> Loeschke 1909, 106.

<sup>23</sup> Menchelli 1997.

<sup>24</sup> Wells 1992, 200.

<sup>25</sup> For this topic see in general: Wells 1992.

<sup>26</sup> Thierrin 1992, 50 ff.; Menchelli 1990-1991; Pasquinucci, Del Rio and Menchelli 1998.

<sup>27</sup> Cristofani 1984, 299.

<sup>28</sup> Liv. 28.45, 16-18. *Arretini tria milia scutorum, galeas totidem, pila, gaesa, hasta longas, milium quinquaginta summam pari cuiusque generis numero expleturos, secures, rutra, falces, alveolos, molas, quantum in quadraginta longas naves opus esset.*

<sup>29</sup> Cherici 1993.

<sup>30</sup> Plin., *Nat. Hist.*, 18, 86-87; 18, 109.

<sup>31</sup> Liv. 28.45, 16-18.

<sup>32</sup> CIL, XIV, 2852.

- <sup>33</sup> Wells 1992, 195.
- <sup>34</sup> Dannell 1971, 262-263.
- <sup>35</sup> Boon 1969, 28.
- <sup>36</sup> Hawkes and Hull 1947, 189-191.
- <sup>37</sup> Hawkes and Hull 1947, 189-191.
- <sup>38</sup> According to von Schnurbein 1982, 83, a regular sigillata trade to *Britannia* did not take place.
- <sup>39</sup> Fulford 1987, 69.
- <sup>40</sup> Pasquinucci and Menchelli in press
- <sup>41</sup> Pasquinucci and Menchelli in press
- <sup>42</sup> Goudineau 1983; Tchernia 1983.
- <sup>43</sup> Picon, Meille, Vichy and Garmier 1972-1973. Demarolle (1987) stressed the fact that Ateian vessels were popular with indigenous aristocracy at *Divodurum*.
- <sup>44</sup> Tihlard 1988; Tihlard *et al.* 1992.
- <sup>45</sup> Bémont 1976.
- <sup>46</sup> Desbat and Picon 1992, 400-401.
- <sup>47</sup> Pasquinucci, Del Rio and Menchelli 1998; in press.
- <sup>48</sup> Ribera I Lacomba 1988-1989, 173-178.
- <sup>49</sup> Fernandez, Granados and Villaescusa 1992, 15.
- <sup>50</sup> Ribera I Lacomba 1988-1989, 173-178.
- <sup>51</sup> Romero Carniciero 1985, 9.
- <sup>52</sup> Moutinho de Alarcão 1975.
- <sup>53</sup> An Atlantic route hugging the Iberian peninsula is less likely (Tihlard 1988, note 44).
- <sup>54</sup> Moutinho de Alarcão 1975, 39-43.
- <sup>55</sup> Guéry 1992; 1994; Kenrick 1996.
- <sup>56</sup> See note 12.
- <sup>57</sup> 437 stamps on 926: Kenrick 1996.
- <sup>58</sup> Guéry 1987a, 132-133.
- <sup>59</sup> Slane, this volume; 2000.
- <sup>60</sup> Hayes 1973, 439. The context, however, is dated 55-70 AD.
- <sup>61</sup> Slane 1987, 193.
- <sup>62</sup> Finds came from parts of the colony built up only in the Claudian period and later (Slane 1987, 193).
- <sup>63</sup> Slane 1987, 191, Fig. 1.
- <sup>64</sup> Zabezhlicky-Scheffenecker 1995b, 221; this volume
- <sup>65</sup> *OCK*.
- <sup>66</sup> Ettliger 1987, 10. See also Fulford 1987, 70.
- <sup>67</sup> The Arretine Ateian sigillata could reach Rome also by the river network *Clanis/Tiber*. At present we have no quantitative contexts available to compare the Ateian presence in the Ostian and urban markets (Martin 1992).
- <sup>68</sup> Rickman 1980, 262.
- <sup>69</sup> Casson 1980; Rickman 1980.
- <sup>70</sup> Fulford 1987, 70.
- <sup>71</sup> Rickman 1980, 265-267.
- <sup>72</sup> Comfort 1962b.
- <sup>73</sup> *OC* n° 144, 148, 160 and 181.
- <sup>74</sup> Comfort 1948, 63.
- <sup>75</sup> Negev 1974, 34.
- <sup>76</sup> Hayes 1971; Blackman and Branigan 1975; Eiring this volume
- <sup>77</sup> Hayes 1977, stressing the role of Paphos as provincial capital and staging post on the direct sea route from Rome to Alexandria and the east.
- <sup>78</sup> Mandruzzato 1988, 415.
- <sup>79</sup> Zhuravlev 2000.
- <sup>80</sup> Slane 2000.
- <sup>81</sup> Holwerda 1936, 41.
- <sup>82</sup> Zabezhlicky-Scheffenecker 1995b, 221; this volume
- <sup>83</sup> Menchelli and Pasquinucci 2000.
- <sup>84</sup> Del Rio, Menchelli, Capelli and Puppo 2000.
- <sup>85</sup> Menchelli 1994; Angeli Bertinelli 1978.
- <sup>86</sup> Cicero, *Verr.* 2, 5, 56, 145-146. Raschke 1978. For Roman imports see Pavolini 1985.
- <sup>87</sup> Mandruzzato 1988, 415.
- <sup>88</sup> Tronchetti 1996, 55-63.
- <sup>89</sup> Hayes 1978; Wells 2000.
- <sup>90</sup> Comfort 1982a.
- <sup>91</sup> *OC* n° 148.
- <sup>92</sup> Kenrick 1987, 144.
- <sup>93</sup> Kenrick 1985.
- <sup>94</sup> Pasquinucci, Del Rio and Menchelli 1998.
- <sup>95</sup> Loane 1938, 49-50.
- <sup>96</sup> Guéry 1987a, 133.
- <sup>97</sup> Loane 1938, 49-50.
- <sup>98</sup> Zhuravlev 2000.
- <sup>99</sup> Begley 1991, 3; Raschke 1978.
- <sup>100</sup> Comfort 1991, 134-139, Fig. 8.7-8.
- <sup>101</sup> Comfort 1991, 139.
- <sup>102</sup> Elaigne, this volume.
- <sup>103</sup> Slane 1991.
- <sup>104</sup> Comfort 1991, 144-145.
- <sup>105</sup> For example, only two Ateian stamps have been found at Magdalensberg (Schindler and Scheffenecker 1977, tab. 91; Menchelli 1997).
- <sup>106</sup> Greene 1997, 27.



## CONTENTS

MARC WAEKENS Preface	IX
JEROEN POBLOME – MARC WAEKENS Introduction	XI
JEROEN POBLOME – PETER TALLOEN The Eastern Roman Empire	XII
RAYMOND BRULET – HUGO THOEN L'Ouest de l'empire roman	XIV
 <b>The Eastern Roman Empire</b>	
JOHN LUND Italian-Made Fine Wares and Cooking Wares in the Eastern Mediterranean Before the Time of Augustus	3-15
JEROEN POBLOME Italian Sigillata in the Eastern Mediterranean	17-30
KATHLEEN WARNER SLANE Corinth: Italian Sigillata and Other Italian Imports to the Early Colony	31-42
GERHILD HÜBNER Die Sigillaten aus Patras: die lokale Produktion im historischen Umfeld	43-58
CATHERINE ABADIE-REYNAL Les modalités d'importation de la sigillée italique à Argos	59-66
ARCHER MARTIN Italian Sigillata in the East. Olympia: a Case Study	67-70
JONAS EIRING The Earliest Italian Sigillata at Knossos	71-72
SUSANNE ZABEHLICKY-SCHEFFENEGGER Italische Sigillata in Ephesos	73-80
PATRICIA KÖGLER – URSULA MANDEL Italische Einflüsse in der knidischen Keramik der frühen Kaiserzeit	81-107
DANIELE MALFITANA The Importation of Stamped Italian Sigillata to Cyprus	109-115
PAUL REYNOLDS Italian Fine Wares in First Century AD Berytus: the Assemblage from the Cistern Deposit BEY 006 12300/12237	117-131
SANDRINE ELAIGNE L'apport italique de sigillées en Egypte au début du Haut-Empire: le cas d'Alexandrie et de Coptos	133-144

## The Western Roman Empire

BERNHARD RUDNICK

Verzierte italische Sigillata in den römischen Militärlagern Westfalens.  
Aspekte des Handels mit Sigillata der mittel- und spätaugusteischen Zeit 147-156

FRÉDÉRIC HANUT

La terre sigillée italique et les horizons Augustéens dans le Nord de la Gaule 157-203

GRÉGORY DELÉCAUT – BENOIT MISONNE – DOMINIQUE LADURON

Essai de détermination de provenance par l'utilisation de la fabrique des sigillées arélines, pisanes  
et lyonnaises présentes dans des sites de Gaule 205-219

ARMAND DESBAT

Le début des importations de sigillées en Gaule: le cas de Lyon 221-225

KATRIN ROTH-RUBI

Zu den frührömischen Importen von Tafelgeschirr in das Gebiet der heutigen Schweiz.  
Eine Arbeitsskizze 227-240

ELENI SCHINDLER KAUELKA

Zur Frage der Spätdatierung: die Planierschicht der Südhangbauten vom Magdalensberg 241-252

PHILIP M. KENRICK

Signatures on Italian Sigillata: a New Perspective 253-262

MARIA PAOLA LAVIZZARRI PEDRAZZINI

La terre sigillée en Italie du nord 263-269

SIMONETTA MENCHELLI

Ateian Sigillata and Import-Export Activities in North Etruria 271-277

GLORIA OLCESE

Italian Terra Sigillata in Rome and the Rome Area: Production, Distribution  
and Laboratory Analysis 279-298

GIANLUCA SORICELLI

La produzione di terra sigillata in Campania 299-307

DANIELE MALFITANA

Italian Sigillata Imported in Sicily: the Evidence of Stamps 309-336

MARISOL MADRID FERNANDEZ

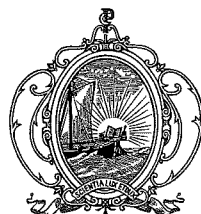
Preliminary Results of Archaeological and Archaeometrical Studies of Early Italian Sigillata  
from Baetulo (Badalona, Spain) 337-350

DAVID WILLIAMS

A Petrological Approach to Italian Sigillata 351-353

List of References 355-387

List of Contributors 389-390



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