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## Made in *Cumae*: local production and global distribution

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**Abstract:** During the period 2004 to 2006, in the village of Cuma, a stadium, built during the 2<sup>nd</sup> century BC was unearthed. It had been erected against or overlapping the inner side of the fortifications. Abandoned very early on, the construction was covered by a deposit, consisting almost entirely of ceramic production waste (thin-walled pottery, common ware and Pompeian red ware). The deposit was not composed solely of pottery, but also contained tools (at least two spacers), structural elements of kilns and possible raw materials related to pottery processing. The majority of the pottery was common ware (pans and lids), a Phlegrean production of common ware well known in literature, for which however, a precise location has never been identified. In the case of the Pompeian red ware, the production area was identified as being in both the Phlegrean and the Vesuvian area. In reference to *Cumae*, Pucci identified the *cumanae testae* or *cumanae patellae - patinae* with Pompeian red ware mentioned in the sources. The context is homogeneous and chronologically defined as being between the Augustan and the Tiberian age. The presence of products from *Cumae* in many sites of Northern Europe, as well as along the French and Spanish coast or Adriatic areas, often bearing the signature of producers known also in *Cumae* (Marii and Helvii), is an interesting clue to understanding the circulation and diffusion systems of local products in an international framework. This article is focused on the local production of *Cumae* and includes an analysis of its circulation in other sites, with reference to both productive, typological and chronological aspects.

**Keywords:** Thin-Walled Pottery; kiln waste, coarse ware, Pompeian red slip ware.

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*The papers published in this volume were presented at the session n° 162 “Culture contacts in Western Mediterranean Sea during the Roman Age. Pottery as cultural marker between traffics and local productions” of the 25<sup>th</sup> Annual Meeting of the European Association of Archaeologists (EAA) - Beyond Paradigms (Bern 4-7 September 2019), organized under the scientific direction of Prof. Marco GiUMAN, Dr. Ciro Parodo and Dr. Gianna De Luca (University of Cagliari. Department of Humanities, Languages and Cultural Heritage. Cittadella dei Musei, Piazza Arsenale 1, 09124 Cagliari, Italy).*

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Since 1994, the area of ancient Cuma has been the subject of a new research program, coordinated by the local Superintendence, in collaboration with the University of Naples Federico II, the University of Campania Luigi Vanvitelli, the University of Naples L’Orientale and the Centre Jean Bérard. The aim of the research program was to investigate multiple aspects of the ancient city, of which, up to that time, very little was known. The research involved only the lower area of the ancient city, namely the Forum, the necropolis and the northern city walls.

Within the research team, the task of the University of Naples L’Orientale was to investigate the urban system and the city walls, with a particular focus on the north-western sector (fig. 1). The study, published a few years ago<sup>2</sup>, made it possible not only to investigate two of the three gates in the northern fortifications, but additionally brought to light circa 170 meters of the fortifications. The excavation on the inner side of the fortifications had a more limited extension. Moreover, in this sector, the intervention was strongly conditioned by the path of the modern sewerage system of Cuma,

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<sup>2</sup> See ‘AGOSTINO, GIGLIO 2012.

which, starting from the middle gate of the three, runs almost parallel to the fortifications, on the south side.

Investigations along the northern walls made it possible to define the different building phases of the city walls<sup>3</sup> (fig. 2).

Between 2004 and 2006, in the area to the west of the middle gate, the steps of the stadium, which was built during the 2<sup>nd</sup> century BC, were unearthed<sup>4</sup>. The stadium was abandoned quite early on, with a first phase of obliteration that can be dated back to the Augustan age and a successive obliteration phase in the early Imperial Age.

In 2008, a small excavation project was carried out in an area of crucial importance with regards to understanding the relationship between the eastern steps of the stadium and the fortifications. At this point, the thickness of the fortifications, whose outer curtain dates back to the late archaic period, is reduced and at the point of contact between the two alignments, there is a staircase leading to the rampart walk. Immediately to the east, exploiting the back wall of the stadium, some rooms develop dating from the late 2<sup>nd</sup> century BC. These were built against the defensive walls in the area between the stadium and the gate (fig. 3).

The excavation of this sector only partially concerned the obliterated levels, and a new and more extensive excavation campaign is advisable.

Unlike the stadium, these structures were utilized for a much longer period, from 1<sup>st</sup> century BC to the 2<sup>nd</sup> AD, to be abandoned successively in late antiquity.

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<sup>3</sup> The fortifications were built in the Archaic age and progressively thickened incorporating the older walls; the maximum extension was reached in the Hellenistic period.

<sup>4</sup> See GIGLIO 2015.

Two rooms, located on the western side and in close vicinity to the stadium, pertain to the first building phase of the stadium. The northern room, close to the inner side of the fortifications, was not investigated. The southern room, quadrangular in shape, has a *cocciopesto* floor, characterized by a square-shaped central cut, perhaps used as a tank, which occupies almost the entire surface of the room. The excavation of this room was not completed, and on the floor, there are considerable traces of burns.

In the 2<sup>nd</sup> AD, there were some transformations of the area. On the north-western side, a system of cisterns was installed, consisting of two rectangular cisterns of similar dimensions (3 x 2 m., for a capacity of at least 18 mc each one).

Slightly to the east, and perhaps in connection with the cisterns, there is a room built in *opus vittatum*, with a rectangular plan. In the very coarse *cocciopesto* floor, there is a rectangular basin that occupies most of the central space. It is surrounded by pillars in *opus vittatum*. The basin may have been used to host a water wheel.

To the east of this environment, a set of wall structures was identified, but only partially brought to light. One of these structures may have been a sort of *praefurnium*. All these rooms were identified as being part of a Roman bath<sup>5</sup>. However, after an inspection of the pottery of the deposit which filled these spaces, it could be defined as a ceramic production settlement.

In this area, an interesting layer was unearthed. The layer was investigated both in the area of rooms as well as between the steps, the back wall of the stadium, the access staircase to the rampart walks and the inner side of the fortifications (fig. 4).

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<sup>5</sup> See D'AGOSTINO, GIGLIO 2012.

The layer was partially removed and investigated to a thickness of approximately 80 cm.

It consists of a silty-sandy layer, very rich in ceramic material (coarse ware, thin-walled pottery and amphorae), so much so that it constitutes almost an entire layer in itself. The finds, which can be quantified in approx. 80000 pieces for an excavated area of approx. 12 mc, were grouped within the layer by class of material. It is worth highlighting the position of the thin-walled pottery, found near the steps of the staircase and the fortifications, which fills the cavities caused by the erosion of the face of the wall structure. In a similar position some amphorae were also unearthed, which had been shattered against the wall structure, while the coarse ware is more diffused within the deposit.

This data, together with the matrix of the deposit, lead us to believe that it was an anthropic deposit, formed in a very short period of time in an area close to that of the discovery and partially altered by an alluvial event that affected the city, dragging, following the natural slope from South to North of this part of the town, the materials against the walls. The state of fragmentation of the finds, the very fresh breaks, as well as their discovery in homogeneous groups, suggests that the distance from the original location of the deposit was minimal.

The deposit is the result of a discharge of waste products (fig. 5), the result of the activity of one or more kilns operating near the discovery site and located either to the south or east, in the area between the middle gate and the stadium.

In the layer, the number of discarded materials is consistent and highlights a wide range of defects, from surface imperfections to the total

deformation and vitrification of the pottery. Many finds do not seem to have obvious cooking defects, despite having been discarded. This may be due to other reasons, such as accidental breakage.

The waste deposit is composed of coarse ware and thin-walled pottery. It also includes lamps, amphorae, Terra Sigillata and black gloss ware, but these may not have been discarded products. With regards to the local coarse ware, the presence of discarded pottery indicates a great production of bifid rim pans, which in total amount to 19.1% of the documented material. The Pompeian red slip ware is composed of circa 25% pans, just over 30% lids, and circa 22% of thin-walled pottery.

As can be noted, the Pompeian red slip ware is the most abundant, with a significant number of objects showing defects in the performance of the engobe, reflecting the risks of a flawed product. The type of defects varies from burns, to the cracking of the engobe up to its detachment which frequently occurs on pieces that, after examining the fracture, do not show traces of an incorrect baking.

The discovery of red pigment residues in the deposit is significant. The color, due to its dusty nature, at the time of the excavation, was widely dispersed in the layer. Its presence had macroscopically modified the color of layer. It is only a hypothesis that these color elements may have been used in the production of Pompeian red slip ware. Archaeometry analyzes are currently in progress<sup>6</sup> to clarify and shed light on this question.

Other findings, more or less directly related to the workshop, originate from the same layer. They are mainly clay objects that show traces of a consistent and prolonged exposure to fire: bars, an elongated pestle with a

trace of oxidation on the crusher and a probable smoothing in fictile materials, as well as spacer disks.

Much more consistent is the evidence referable to the structure of the kiln, identified as a jar used for building the vault and raw clay used to weld the containers (fig. 6).

In addition to that which was produced on the site, there are other objects that cannot be identified as waste, perhaps also produced in Cuma. Most of the fragments can be associated with Terra Sigillata, with productions that date from between the end of the 1<sup>st</sup> century BC to the beginning of the 1<sup>st</sup> century AD.

The highest quantity of finds belongs to thin-walled pottery. This pottery represents 1/5 of the material found in the context. A total of 6,156 diagnostic elements were identified (including lips, feet, handles, bottoms and decorated walls).

The documented types cover a rather wide chronological span, from the second quarter of the 1<sup>st</sup> century BC to the entire 1<sup>st</sup> century AD. However, the great majority seem to correspond to a middle-late Augustan phase.

Circa 90% is attributable to 6 main types<sup>6</sup>. The Cuman center seems to have been active in the production of both cups and mugs.

Taking into consideration only rims, circa 7800 diagnostic elements of coarse ware were identified. This number increases considerably when one also takes into consideration bottom fragments and handles.

The state of preservation of the objects is quite variable, with objects that can be reconstructed or with a good percentage of the profile of the vessel.

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<sup>6</sup> A study of thin-walled pottery production is currently in progress by G. Borriello; we have identified six types in Cuman fabric (Atlante 1/158, 1/177, 1/362, 2/253, 2/316 and 2/412). The types 1/362 and 2/316 are the most numerous.

From a qualitative point of view too, the objects found have different characteristics, some being of good quality, while others are of poor quality. Only 30% of the diagnostic elements can be properly considered production waste. Despite a large number of objects, a systematic reassembly of the fragments was not possible. Therefore, it is not to be excluded that fragments with obvious defects can be associated with fragments that do not present defects.

In the past, a ceramic production in the Phlegraean area had already been hypothesized, in particular with regards to coarse ware. However, it was impossible to identify a precise location of the production center.

In the case of Pompeian red slip ware pans, the presence of production workshops in both the Phlegraean and Vesuvian areas, was hypothesized.

The identification was based exclusively on the analysis of the clay carried out by Peacock<sup>7</sup>, who traced production to this area. At this current stage in the research, although numerous archaeological investigations have been carried out in the last fifteen years in the Pompeian area, which have led to the identification of ceramic workshops active in the production of thin-walled pottery<sup>8</sup>, no other archaeological evidence is available.

As far as the Phlegraean area and Cuma are concerned, however, there is the need to resort to both ancient sources and some archaeological findings. With reference to Cuma, Pucci<sup>9</sup> identified with the Pompeian red slip ware, the *cumanae testae* or *cumanae patellae – patinae*, mentioned both in

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<sup>7</sup> See PEACOCK 1977; on Pompeian red slip ware production, a synthesis is in LEOTTA 2005.

<sup>8</sup> See CAVASSA 2009, CAVASSA *et alii* 2013; TONIOLO 2016.

<sup>9</sup> See PUCCI 1975.

Apicius and in an epigram by Martial<sup>10</sup>; other testimonies of *Cumanae* pans are found in Tibullus and Stazio.

Moreover, approximately twenty years ago, an old excavation context was presented, from the so-called *Crypta Romana* in Cuma, consisting of a deposit of Pompeian red slip ware. In addition to the numerous pans with a reconstructable profile, fragments with defects were also found, for which it was possible to identify three types, all referable to pans with an indistinct rim. Hence, a Cuman production from the late Republican age up until the 2<sup>nd</sup> AD<sup>11</sup>, was thus hypothesized.

In recent years, thanks to numerous investigations conducted in Cuma as part of the Kyme project, Laetizia Cavassa<sup>12</sup>, supported by Vincenzo Morra's research group with regard to archaeometry analyses, published a number of contributions in which the results of the analyses conducted on defected fragments are presented, including Pompeian red slip ware pans, one of which is clearly identifiable as production waste. All the finds published come from contexts datable between the 1<sup>st</sup> century BC and the 1<sup>st</sup> century AD, unearthed immediately outside the middle gate, in an area very close to the deposit. They are attributable to the Goudineau 13 and 15 types, in some cases with signatures or markings incised before firing, on the outer side of the pan. More consistent are the finds analyzed in coarse ware, especially the bifid-edged pans, which in some cases bear signatures or markings. This data is well associated with that which emerged from the

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<sup>10</sup> *Hanc tibi Cumano rubicundam pulvere testam Municipem misit casta Sibylla suam.* (Mart. XIV, 114); *Pullum laseratum: pullum aperies a nauis, lauabis, ornabis et in Cumana ponis. teres piper, ligusticum, laser uiuum, suffundis liquamen, uino et liquamine temperabis, et mittis in pullum. coctus si fuerit, piper aspersum inferes.* (Ap. VI, 9, 5)

<sup>11</sup> See CHIOSI 1996.

<sup>12</sup> See CAVASSA 2004, CAVASSA *et alii* 2009.

deposit and could be either a clue of a vast production area incorporating both the interior and exterior of the ancient city or most probably, according to the excavation data, of the dispersion of elements from a single production settlement located within the walls, close to the middle gate.

In the deposit, we found the following types of coarse ware (fig. 7):

- i) Lids with a flat or rounded rim, amounting to 41% of the material present.
- ii) bifid rim pans, with both straight and hemispherical walls, amounting to 26% of the material present.

These types, combined with other shapes, in very small numbers and for which we do not have a high number of deformed elements, are a clear indicator of a production site.

Although not present within the production deposit, but only documented with a secondary use, there are three types of ovoid olla.

These are associated with the Pompeian red slip ware production and include: pans with a small brim, such as the type Luni 2-4 / Goudineau 17 (fig. 8), and pans with an indistinct and flat rim, such as the type Luni 3 and 5 / Goudineau 16 / Di Giovanni 2110 (fig. 9), amounting to 33%. As far as the Pompeian red slip ware are concerned, in the absence of a single reference type, it was decided to use the double nomenclature of Luni (cited, for example, in the edition of the materials by Tarraconense<sup>13</sup>) and Goudineau.

The materials found also show a high dimensional variability; both the pans and the lids have diameters between 28cm and 48cm. Some Pompeian red slip ware pans have an exceptional diameter, equal to 66 cm and a wall

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<sup>13</sup> See AGUAROD OTAL 1991.

thickness of approx. 2 cm. Such objects, notably heavy, do not seem to have had a wide diffusion.

Another element, which was not known up until now, relates to the pans with a very small diameter, an extremely reduced wall thickness and a well-spread slip. In this case, a wide diffusion outside Cuma is not known.

Furthermore, with regards to the Pompeian red slip ware, emerging from a first autopsy analysis, the clay of the Cuman production differs in quantity and size in relation to the volcanic inclusions from the clay of the objects found in Pompeian stratigraphic contexts. Another difference is the quality of the slip, very high with regards to Cuman production while very poor in Pompeian production. Moreover, the Pompeian morphological repertoire seems to foresee a prevalence of types with an almond-shaped rim or indistinct rim, while those with small brim rims are quite rare.

The context is homogeneous and chronologically defined between the Augustan and Tiberian ages. Among the Pompeian red slip ware productions, there are testimonies both of well-known types from contemporary contexts (for example Oberaden and Haltern, from which originates, among other types, a fragment with graffiti on the bottom, S MAR - Sextus Marius, which is part of the well-known production of the Marii, or Corinth) and in older contexts.

A mortar and the brimmed-rim pots show an analogous chronology, as their production and diffusion began in this period. Harder to define is the chronology of the bifid pans, lids and Pompeian red slip ware. For example, the bifid pans exported to Tarrakonense<sup>14</sup>, where there are two types, dated

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<sup>14</sup> See AGUAROD OTAL 1991.

respectively from the second half of 2<sup>nd</sup> century to the first half of 1<sup>st</sup> BC (type 3) and from the end of the 2<sup>nd</sup> BC to the first half of the 1<sup>st</sup> AD (type 4).

Furthermore, regarding the Pompeian red slip ware pans, similar types emerge from Cuman stratigraphic contexts that can be dated between the end of the 2<sup>nd</sup> and the 1<sup>st</sup> century BC<sup>15</sup>.

However, it is to be excluded that these elements have a wider chronological range both due to the formation of the deposit and to the substantially homogeneous number compared to the other types found.

At this current stage in the research, in the absence of a confirmation with regards to the production location of the objects from provincial contexts, it is possible to hypothesize a productive continuity of the Cuman center with long lasting morphological types. Our discharge, in fact, seems to represent only one of the moments of life of the productive activity.

However, these products made in Cuma seem to have had a wide circulation in the Mediterranean basin (fig. 10), as well as in northern Europe, as attested by the presence in the Germanic *limes*<sup>16</sup> (fig. 11). One of the distinctive signs of the production seems to be the presence of the signatures or graffiti of the producer Marius, currently not documented in our context, but resulting from other layers excavated in Cuma<sup>17</sup> (fig. 12). The signatures on the bottom of the Pompeian red slip ware pans regard the production of TYRAN MAR and another Marius worker, while a bifid rim pan bears the signature of Lucius Helvius Protus.

These are associated with a graffito, similar to that preserved in Haltern, perhaps referable to the production of an A. Marius. The evidence of

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<sup>15</sup> See GIGLIO 2015.

<sup>16</sup> A first work on distribution is in CAVASSA 2016.

<sup>17</sup> See CAVASSA 2016.

signatures and trademarks referable to the Marii were analyzed years ago by Papi<sup>18</sup>, who provides an extensive list, including a TUR MARI, documented in Germany, most probably associated with the TYRAN MAR known from Cuma.

In this deposit, we did not find objects with signatures, but fragments with epigraphic signs are well documented, incised before cooking, on the external bottom of the pans, as well as on Pompeian red slip ware. Only in one case, the sign is a number (fig. 13), while in other cases, it is a single letter or a partial sequence of letters (fig. 14), which could indicate names and be connected to productive aspects. A similar system, in which we can also note a certain correspondence of graphic signs, has already been documented on Pompeian red slip ware pans with a flat rim found in Pompeii<sup>19</sup> (fig. 15).

Furthermore, from the excavation of the inhabited area of Cuma originates a Pompeian red slip ware pan with an indistinct rim, compatible for type and clay with our workshop, branded L HEL HIL. This is a second testimony of a producer of the Lucii Helvii family<sup>20</sup> (fig. 16).

The data from the Cuman excavations permits the identification of the existence of two families, the Lucii Helvii and the Marii families, owners of workshops active in the production and distribution of coarse ware in the chronological period of our interest.

The absence of other elements does not permit associating our kiln with one of the two workshops, nor does it exclude its association with other groups active in Cuma in the same chronological period. The existence of

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<sup>18</sup> See PAPI 1994.

<sup>19</sup> See CAVASSA 2016.

<sup>20</sup> From Frejus and maybe Magdalensberg, see CAVASSA 2016.

several producers who can be traced back to Cuma, who marked their products using different signatures, is clear evidence of the importance of the Phlegraean center in the production of coarse ware.

These products were not made for local distribution, but for an extra-regional circulation, principally directed towards the northern provinces of the Empire.

New data has emerged from the contexts of Aquileia and Magdalensberg, where numerous coarse ware, and all the Pompeian red slip ware produced in the Bay of Naples and in Cuma, were exported<sup>21</sup>. In Magdalensberg, the Campanian products are datable as early as the late Republican era. In Aquileia, a center that most probably played a role as an arrival and subsequent diffusion point towards Pannonia and the Rhineland, the major testimonies seem to date from the Augustan age.

Among the Pompeian red slip ware found in Magdalensberg, we can note the high number of marked and / or graffiti objects *ante cocturam*. In some cases, only letters are documented, while in others, parts of words, probably referring to names<sup>22</sup>, are to be found.

Among the signatures, those of the two families of producers, the Helvii and the well-known Marii, to which the Cornelii seem to associate themselves, with a single attestation, are clearly recognizable.

It is interesting to note the different quantity of material marked in the reception centers compared to those of production and / or transit, given that it could indicate a function of the markings for the final distribution of the product. Only in Magdalensberg, 19% of the Pompeian red slip ware is

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<sup>21</sup> See RICCATO in press and SHINDLES-KAUDELKA – CAVASSA in press.

<sup>22</sup> According to the list of Pompeian red slip ware stamps made by L. Cavassa (CAVASSA 2016).

marked<sup>23</sup>. Naturally, when reading this data, we must consider the different quantitative level of the editions of Campanian contexts compared to those provincial.

In conclusion, it is important to focus on some data from the Eastern Adriatic coast. Twenty years ago, Jurisic published a catalogue of ancient shipwrecks of this area<sup>24</sup>. In some cases, “southern Italian pottery”<sup>25</sup> is documented; the most important being the Cape Glavat shipwreck<sup>26</sup>. Here a deposit of bifid rim pans, coarse ware pottery and Pompeian Red Slip Ware was found (fig. 17). The deposit dates from the end of 1<sup>st</sup> century AD; the description of the fabric seems to suggest that the pottery was probably made in Cuma.

This data is important for two reasons: the chronology at the end of the 1<sup>st</sup> century AD as well as testifying the distribution of Cuman production along the Adriatic eastern coast.

Thanks to the study of signatures on coarse ware made by Papi and Cavassa, in which that of Marii production stands out (38 of 152 signatures or graffiti), a presence of this production, albeit in limited numbers in Herculaneum, Puteoli, Ostia and in greater numbers in the Germanic, Spanish or eastern Mediterranean centers, is known.

In the light of this new data, a revision of Pompeian red slip ware and Italic coarse ware from provincial contexts is deemed necessary for a better attribution of the production area in addition to a definition of the period of circulation of these products.

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<sup>23</sup> A first edition of Campanian pottery in Magdalensberg is in SHINDLER-KAUDELKA 1986.

<sup>24</sup> See JURISIC 2000; the author provides a synthesis of pottery production in the analyzed shipwreck.

<sup>25</sup> JURISIC 2000, pp. 29-30.

<sup>26</sup> JURISIC 2000, pp. 61-63.

**BIBLIOGRAPHY:**

AGUAROD OTAL 1991: C. Aguarod Otal, *Ceramica romana importada de cocina en la Tarraconense*, Zaragoza 1991.

BORRIELLO *et alii* 2016: G. Borriello, M. Giglio, S. Iavarone, *Nuove evidenze sulla produzione di ceramica d'età romana in area flegrea: uno scarico di fornace da Cuma (NA)*, in *RCRF Acta 44*, Bonn 2016, pp. 9-18.

CAVASSA 2004: L. Cavassa, *La vaisselle de Cumes (Italie): deux étude de cas (I<sup>er</sup> siècle avant J.-C./ I<sup>er</sup> siècle après J.-C.)*, in *SFECAG Actes du Congrès de Vallauris (20-23 Mai 2004)*, Marseille 2004, pp. 79-84.

CAVASSA 2009: L. Cavassa, *La production de céramique commune à Pompéi. Un four de potier dans l'insula 5 de la regio I*, in M. Pasqualini (ed.), *Les céramiques communes d'Italie et de Narbonnaise. Structures de production, typologies et contextes inédits IIe s. av. J.-C. – IIIe s. apr. J.-C. Actes de la table ronde de Naples organisée les 2 et 3 novembre 2006*, Naples 2009, pp. 95-104.

CAVASSA 2016: L. Cavassa, *"Patinae made in Cumae": les céramiques à vernis rouge pompéien de Cumes*, in D. Djaoui (ed.), *Histoires matérielles: terre cuite, bois, métal et autres objets. Des pots et des potes: Mélanges offerts à Lucien Rivet*, 2016, pp. 263-280.

CAVASSA *et alii* 2013: L. Cavassa, B. Lemaire, J.M. Piffeteau, *Pompéi. L'atelier de potier*, in *Chronique des activités archéologiques de l'École française de Rome, Italie du Sud*, (09 aprile 2013), <http://cefr.revues.org/881>

CAVASSA *et alii* 2009: L. Cavassa, A. De Bonis, C. Grifa, A. Langella, V. Morra, *Le ceramiche comuni di Cuma*, in *Actes de la Table Ronde Les céramiques communes de Marseille à Gênes (et en Languedoc, Campanie, Sicile), IIe s. av. J.-C. - IIIe s. apr. J.-C. (Structures de production, typologies et contextes inédits)*, Naples, 2 et 3 novembre 2006, Naples 2009, pp. 309-330.

CHIOSI 1996: E. Chiosi, *Cuma. Una produzione di ceramica a vernice rossa interna*, in M. Bats (ed.), *Les Céramiques Communes de Campanie et Narbonnaise (I<sup>er</sup> s. av. J.-C. - II<sup>e</sup> s. ap. J.-C.)*, Napoli 1996, pp. 225-233.

D'AGOSTINO, GIGLIO 2012: B. d'Agostino, M. Giglio (eds.), *Cuma Le fortificazioni 3. Lo scavo 2004 – 2006*, Napoli 2012.

DI GIOVANNI 1996: V. Di Giovanni, *Produzione e consumo di ceramica da cucina nella Campania romana (II a.C.-II d.C., in M. Bats (ed.), Les Céramiques Communes de Campanie et Narbonnaise (I<sup>er</sup> s. av. J.-C. - II<sup>e</sup> s. ap. J.-C.), Napoli 1996, pp. 65-103.*

GIGLIO 2015: M. Giglio, *Lo stadio di Cuma*, Napoli 2015.

GIGLIO, TONIOLO in press: M. Giglio, L. Toniolo (eds.), *The production and distribution network of the bay of Naples, from a regional to a Mediterranean perspective*, in press.

JURISIC 2000: M. Jurisic, *Ancient Shipwrecks of the Adriatic: Maritime Transport During the First and Second Centuries AD*, Oxford 2000.

LEOTTA 2005: M.C. Leotta, *Ceramica a vernice rossa interna*, in D. Gandolfi (ed.), *La ceramica e i materiali di età romana. Classi, produzioni, commerci e consumi*, Bordighera 2005, pp. 115-120.

PAPI 1994: E. Papi, *Bolli su ceramica a vernice rossa interna*, in *Epigrafia della produzione e della distribuzione, Actes de la VIIe Rencontre franco-italienne sur l'épigraphie du monde romain (Rome, 5-6 juin 1992)*, Rome 1994, pp. 287-300.

PEACOCK 1977: D.P.S. Peacock, *Pompeian Red Ware*, in D.P.S. Peacock (ed.), *Pottery and Early Commerce. Characterization and Trade in roman and later ceramics*, New York – London 1977, pp. 147-162.

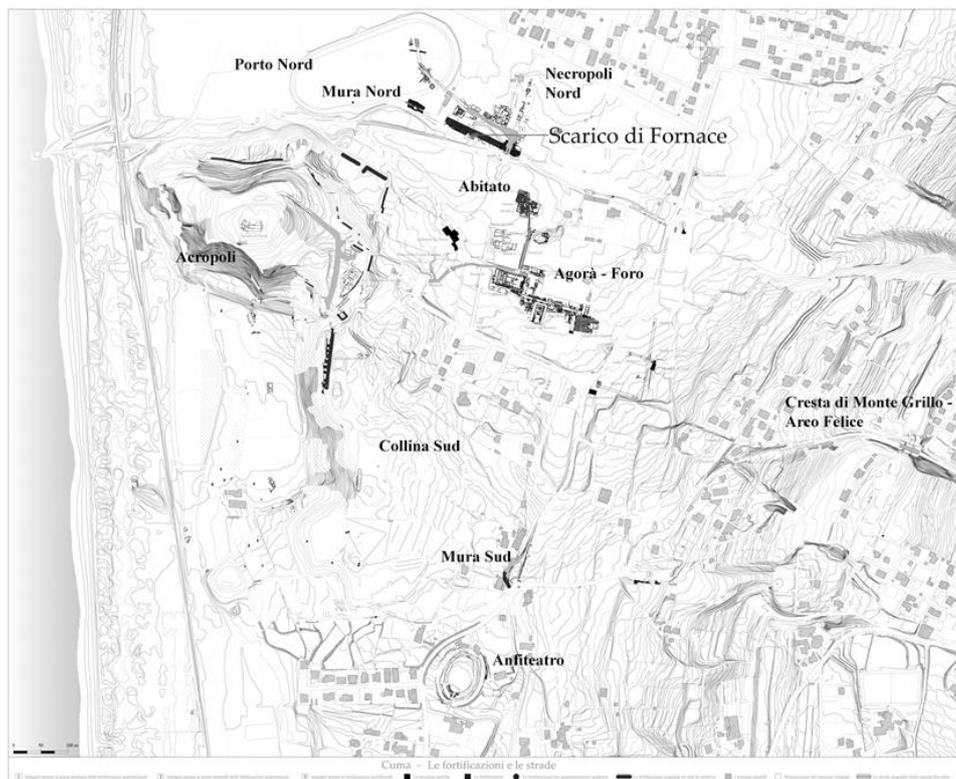
PUCCI 1975: G. Pucci, *Cumanae Testae*, in *PP* 30, 1975, pp. 368-371.

RICCATO in press: A. Riccato, *Dal golfo di Napoli ad Aquileia. Le ceramiche da cucina di produzione campana in area nord-adriatica*, in GIGLIO, TONIOLO (eds.), in press.

SHINDLER-KAUDELKA 1986: E. SHINDLER-KAUDELKA, E. Schindler Kaudelka, *Die Backplatten vom Magdalensberg*, in H. Vetters, G. Piccottini (eds.), *Die Ausgrabungen auf dem Magdalensberg 1975 bis 1979*, Klagenfurt 1986, pp. 279–337.

SHINDLER-KAUDELKA – CAVASSA in press: E. Schindler Kaudelka, L. Cavassa, *Importe aus der Vesuvregion in die Stadt auf dem Magdalensberg*, GIGLIO, TONIOLO (eds.), in press.

TONIOLO 2016: L. Toniolo, *Una nuova officina di ceramica comune a Pompei (Regio I,1,10): il sistema produttivo e il repertorio tipologico*, in *RCRFActa* 44, Bonn 2016, pp. 297-305.



**Fig. 1.** Map of the archaeological area of Cumae (from D'AGOSTINO, GIGLIO 2012).

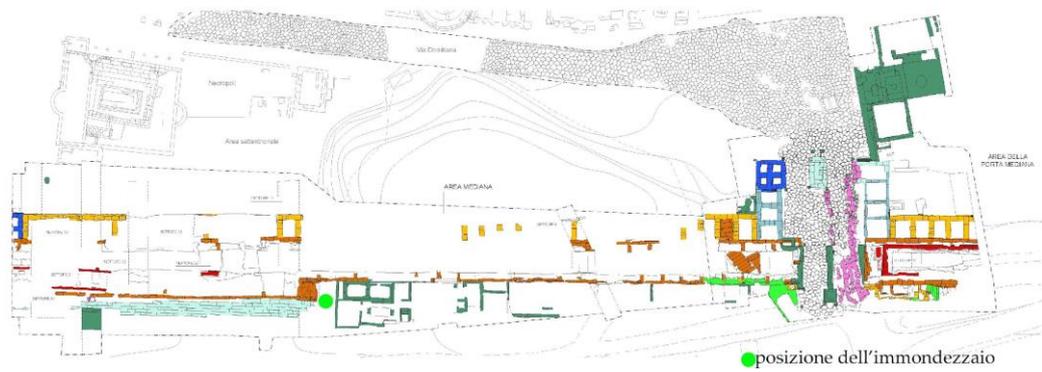
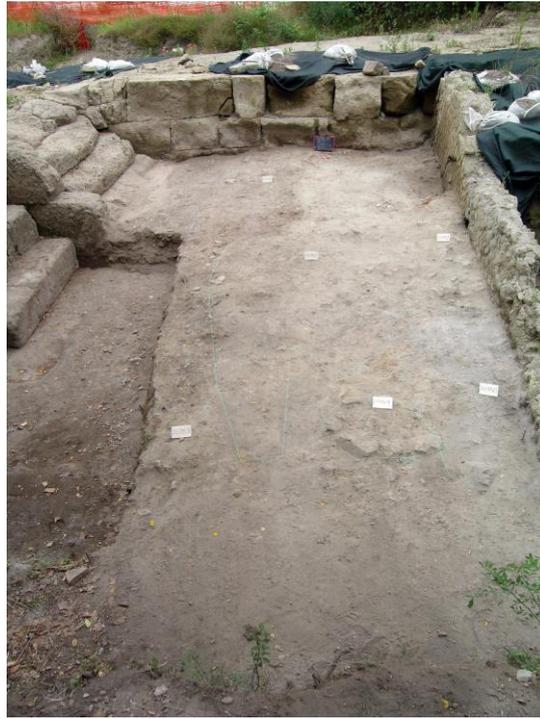


Fig. 2. Map of the northern wall of Cuma (from D'AGOSTINO, GIGLIO 2012).



Fig. 3. some rooms built against the northern city wall, before the excavations (photo V. Malpede).



**Fig. 4.** The waste deposit near the city wall (photo M. Giglio).



**Fig. 5.** A selection of waste products (photo M. Giglio).



**Fig. 6.** *Ollae* from the structure of the kiln (photo S. Iavarone).

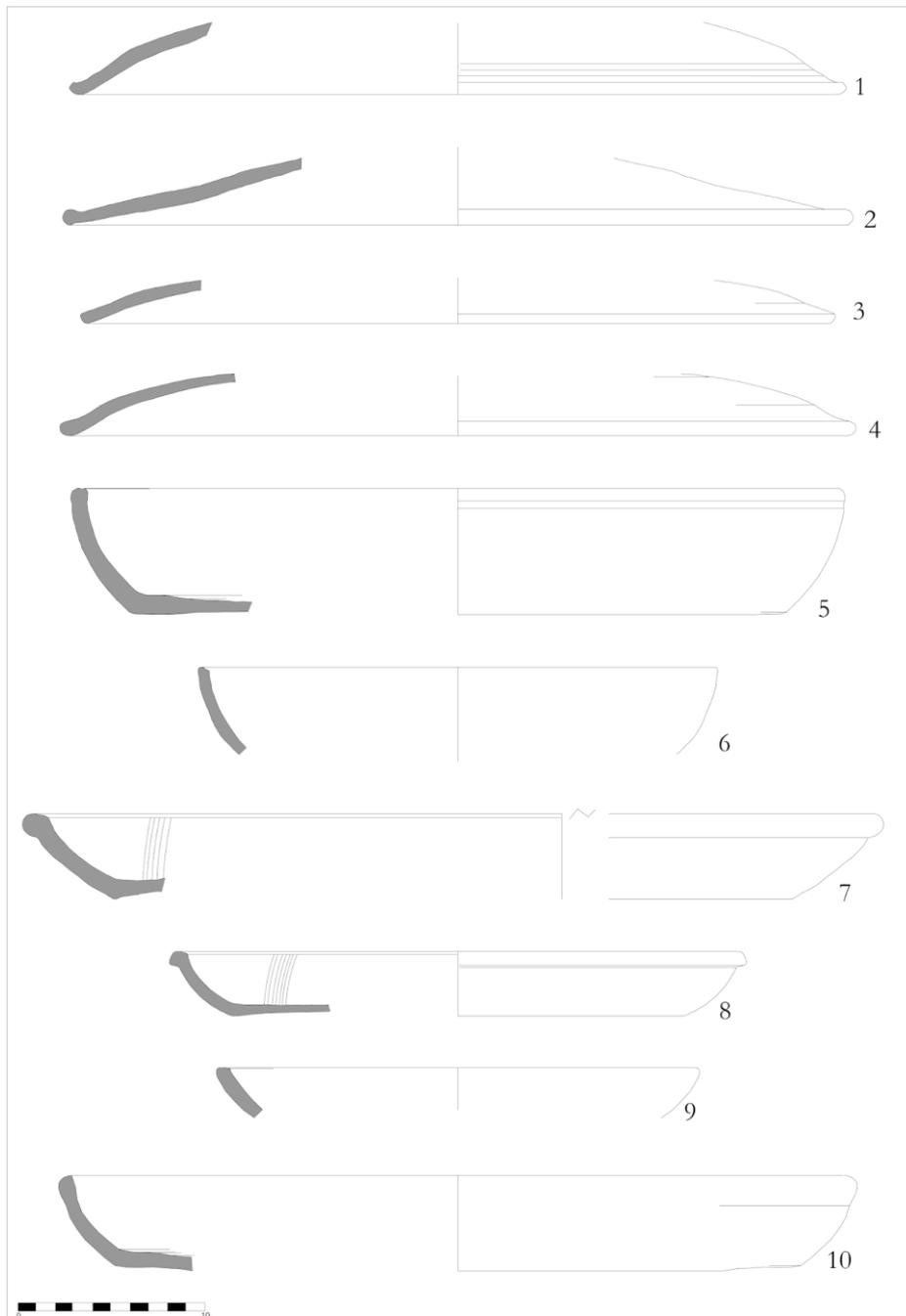
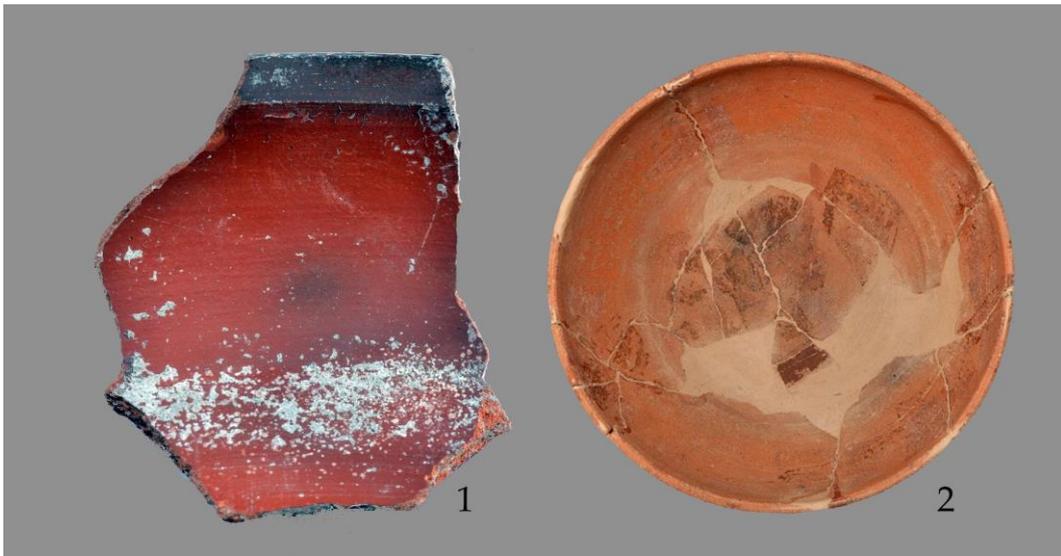


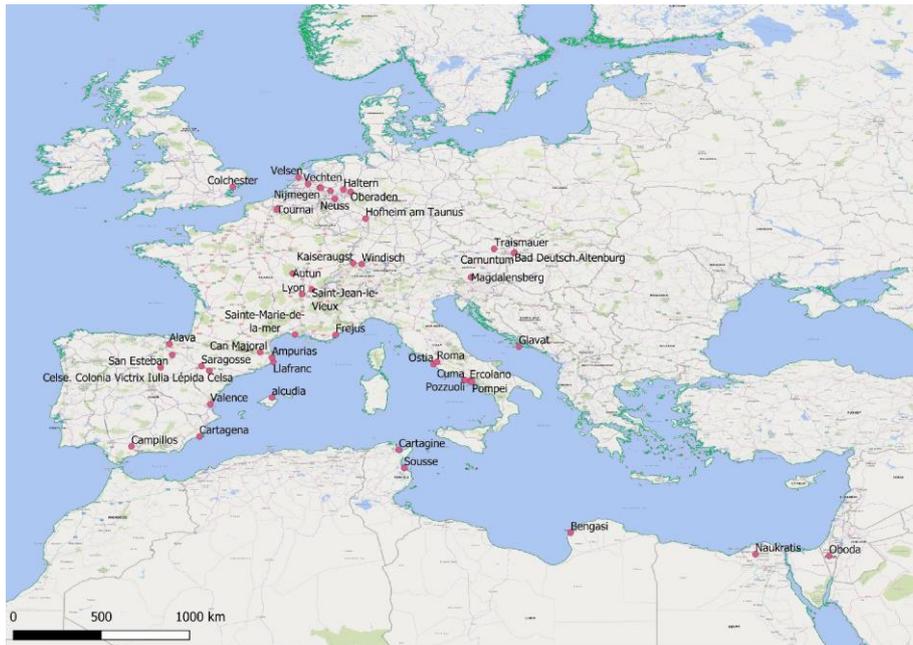
Fig. 7. Cuman coarse ware production: lids and pans (drawn M. Giglio).



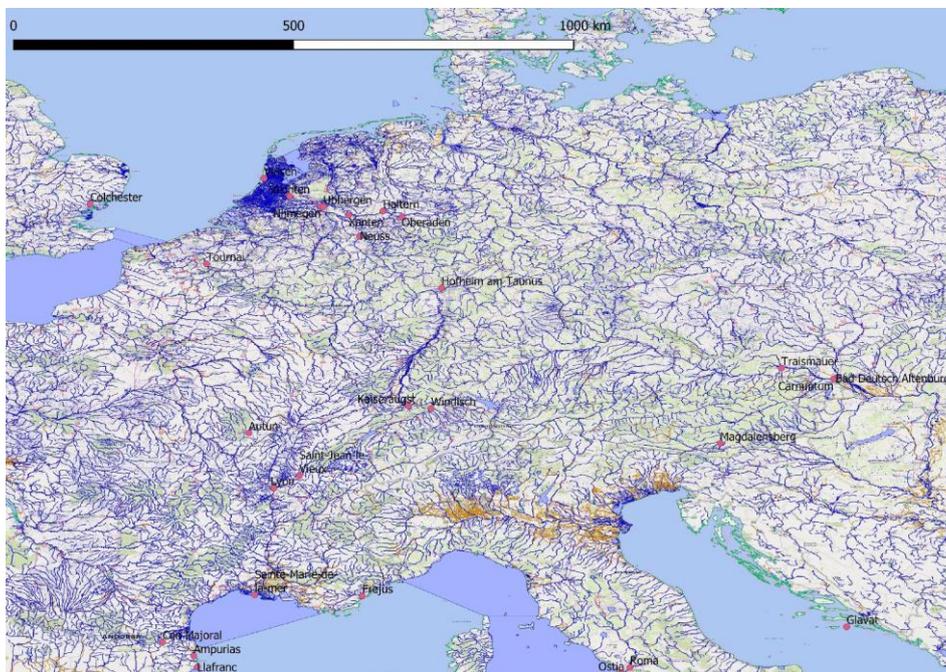
**Fig. 8.** Pompeian red slip ware pans (photo M. Giglio).



**Fig. 9.** Pompeian red slip ware pans (photo M. Giglio).



**Fig. 10.** distribution map of Pompeian red slip ware pan stamps (drawn M. Giglio, from CAVASSA 2016).



**Fig. 11.** distribution map of Pompeian red slip ware pan stamps: northern Europe (drawn M. Giglio, from CAVASSA 2016).



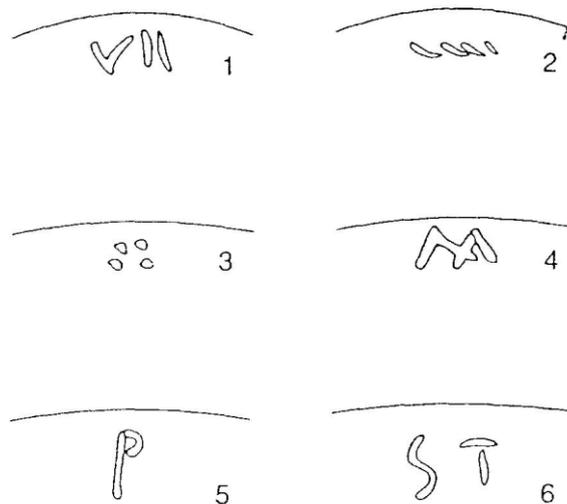
**Fig. 12.** a selection of signatures on Pompeian red slip ware pan (from CAVASSA 2016, fig. 3).



**Fig. 13.** A graffito on Pompeian red slip ware: a number - DXLVII (photo M. Giglio).



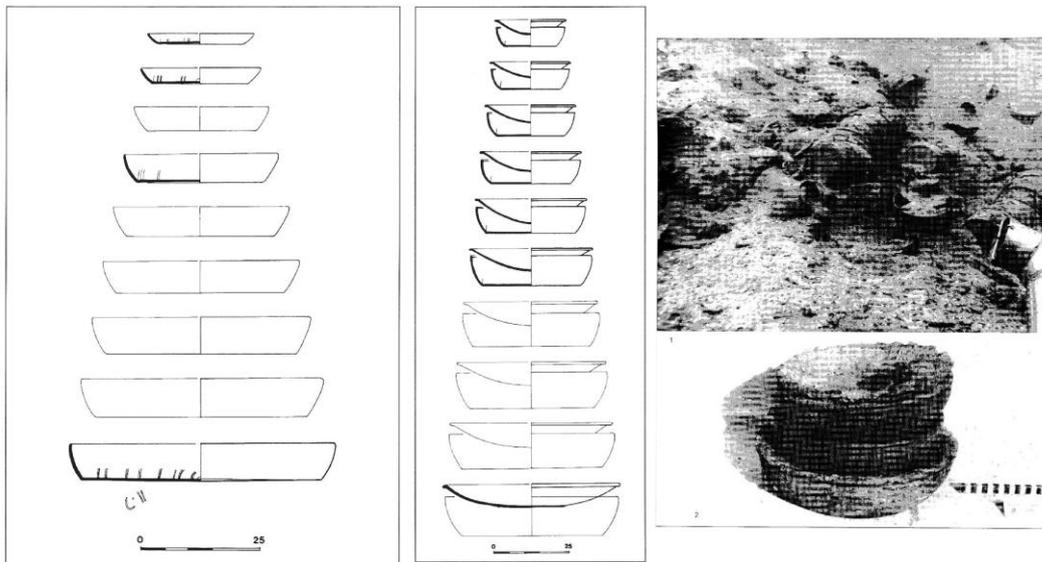
**Fig. 14.** a graffito on Pompeian red slip ware: sequence of letters - AL (photo M. Giglio).



**Fig. 15.** Graffiti on coarse ware (from DI GIOVANNI 1996).



**Fig. 16.** stamp L HEL HIL on Pompeian red slip ware (photo M. Valletta).



**Fig. 17.** coarse ware and Pompeian red slip ware from the Glavat shipwreck (from JURISIC 2000).