

## “Evidence for Pottery Production from the Torre VIII/Porta di Nola Refuse Middens”

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**Abstract:** The Pompeii Artefact Life History Project has recently restudied the materials recovered in excavations carried out at Pompeii in 1978 in the Torre VIII/Porta di Nola area by a team from the Università Statale di Milano. These materials were recovered in four refuse middens deposited against the outer face of the town's fortifications. The pottery included several sherds with manufacturing defects (cracking, reduction, fusing, bloating, collapse) that represent refuse from a pottery workshop. This establishment, which produced utilitarian vessels in a coarse, ferruginous fabric made with volcanic clay and a porphyritic fabric made with marine clay and volcanic temper, along with thin-walled ware in a ferruginous fabric made with a gritty volcanic clay, was active for a poorly defined span of time during the period ca. 50 BC – AD 50. Since the material in the middens likely originated in the neighboring parts of *Regiones* III and IV we surmise that the workshop was situated somewhere in this part of the town.

**Keywords:** Pompeii, pottery workshop, production defects, utilitarian ware, thin-walled ware

### 1. Background

During its summer 2014, 2015, and 2016 study seasons the Pompeii Artifact Life History Project (PALHIP) completed an analysis of the set of artefactual materials recovered in the excavations carried out by a team from the Università Statale di Milano in 1978 immediately outside the fortification wall of Pompeii in the area between Torre VIII and the Porta di Nola. As part of this work we identified numerous pottery fragments with more or less pronounced production defects that point to the presence of a pottery workshop probably situated at no great distance from this location. This article presents an overview and preliminary analysis of these materials, considering the classes of pottery represented, the fabrics and forms associated with each of these, the raw materials employed for the production of these fabrics, the dates of the workshop's activity, and the establishment's likely location. The archaeometric research group at the Università di Napoli Federico Secondo directed by Vincenzo Morra has subjected a small set of these pottery fragments to a battery of compositional analyses, and a presentation of some of the results of this work appears elsewhere in this volume.

PALHIP is a long-term project being undertaken under the direction of the author by a team from the University of California, Berkeley in the USA with the authorization of and in coordination with the Soprintendenza Speciale per i Beni Archeologici di Pompei, Ercolano e Stabiae.<sup>1</sup> The project's aim is to elucidate various aspects of the life history of portable material culture at Pompeii and its environs through the analysis of selected groups of artifacts excavated by previous projects. The analysis of each of these groups of materials is represented as a sub-project within the larger project framework. During the period 2012-

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<sup>1</sup> PEÑA 2014; PEÑA AND CHEUNG 2015.

2016 the PALHIP team, which generally numbers between three and five persons, has undertaken a five- to six-week study campaign each summer. Our work has focused on documenting the makeup of assemblages and the condition of the artifacts included in these with a view to gaining insights into the manufacture, acquisition, storage, use, maintenance, reuse, recycling, and discard of these items.

To date the PALHIP team has completed or initiated the following sub-projects:

Sub-Project 1: The analysis of the artefactual finds from the Villa Regina a Boscoreale;

Sub-Project 2: The analysis of the artefactual finds from test trenches excavated in the unnamed road separating *Insulae* IX.11 and IX.12;

Sub-Project 3: The analysis of the artefactual finds from the Torre VIII/Porta di Nola excavations (the sub-project that is the focus of this article);

Sub-Project 4: The analysis of a set of eight *dolia* uncovered in *Insula* I.22;

Sub-Project 5: The archaeometric analysis of pottery from the Torre VIII/Porta di Nola excavations;

Sub-Project 6: The analysis of amphoras from Villa B at Oplontis.

## 2. The Torre VIII/Porta di Nola Excavations

The excavations in the Torre VIII/Porta di Nola area were undertaken by a team from the Università Statale di Milano during the period September – November, 1978 under the direction of Cristina Chiaramonte Trerè.<sup>2</sup> This team excavated three large middens, which it termed *Cumuli* I, II, and III, deposited against the outer face of the town's fortification wall. (fig. 1) *Cumuli* I and II were situated immediately to either side of Torre VIII, while *Cumulus* III lay at a point ca. 55 m along the curtain wall to the east, that is, in the direction of the Porta di Nola. The team also excavated three small probes against the outer face of the curtain wall, termed *Saggio* 1, 2, and 3. In *Saggio* 2, which was situated ca. 10 m further along the wall from *Cumulus* III in the direction of the Porta di Nola, the stratigraphic unit situated immediately below the ejecta from the AD 79 eruption – termed Stratum 1 – proved to be a midden generally similar in its characteristics to *Cumuli* I, II, and III.

Chiaramonte Trerè and her collaborators published the results of these excavations in 1986 as the major portion of a monograph dedicated to the fortification walls of Pompeii.<sup>3</sup> Included in this volume was a chapter by Laura Romanazzi and Anna Maria Volontè that presented descriptions of a selection of the materials recovered in the *Cumulus* I, II, and III middens, including 221 pottery vessels, 35 terracotta lamps, and 8 fragments of vessel glass.<sup>4</sup> This chapter did not treat any of the materials from the *Saggio* 2 midden on the grounds that these were similar in nature and date to the materials from *Cumuli* I, II and III. Romanazzi and Volontè concluded that 90% of the materials recovered in the middens dated to the Julio-Claudian and early Flavian periods, suggesting that these features consisted of refuse dumped over the wall in connection with clean-up operations following the earthquake of AD 62. The pottery, lamps, glass, and the other categories of material culture from *Cumuli* I, II, and III

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<sup>2</sup> CHIARAMONTE TRERÈ 1986, p. 23.

<sup>3</sup> CHIARAMONTE TRERÈ 1986, pp. 23-31, 35-53, 57-113.

<sup>4</sup> ROMANAZZI AND VOLONTÈ 1986.





Figure 1: Composite satellite image/map showing area of Torre VIII/Porta di Nola excavations. M = Midden; S = Saggio. (Courtesy Eric Poehler/Pompeii Bibliography and Mapping Project)

not included in Romanazzi and Volontè's chapter and the artifacts from the *Saggio 2* midden – a substantial amount of material - were never studied or published.

PALHIP was interested in analyzing the materials from these features as they represented one of the few instances in which extramural refuse middens at Pompeii have been subject to controlled excavation. The Torre VIII/Porta di Nola materials were housed in the Deposito Archeologico di San Paolino in eight standard plastic *cassette*. PALHIP arranged to set up a work space in the covered area at this facility and carried out its analysis of these materials during the period June-July 2014, June-July 2015, and July 2016.

To date it has not been possible for us to establish in which of these three features the materials recovered in *Cumuli* I, II, and III originated. We have been able to distinguish, however, the set of materials recovered in the *Saggio 2* midden. A substantial number of sherds with manufacturing defects were recovered in this last feature, and at present it seems plausible to conjecture that all of the other sherds that display manufacturing defects were recovered in *Cumulo* III – ca. 10-15 meters distant from *Saggio 2* - rather than in *Cumuli* I and/or II, roughly 65 meters away.

Our analysis of the pottery revealed the presence of three groups of vessels represented by specimens with manufacturing defects that can be distinguished on the basis of their fabrics and forms, here termed Groups 1, 2, and 3.

### 3. Manufacturing Defects

Before turning to a consideration of these materials it is essential to indicate the criteria that we employed for the identification of pottery with manufacturing defects.

Roman pottery workshops normally generated large amounts of pottery marked by one or more kinds of manufacturing defect that was on this account deemed unsuitable for marketing. While some of this pottery – generally that marked by irregular firing of some kind – can be recognized as such by archaeologists, a substantial amount – that rendered unusable due to the formation of cracks or breakage during firing, vessels marred by the presence of some minor defect in their finish, finished vessels broken or damaged during storage or handling - cannot in many instances be recognized as pottery discarded due to the presence of a manufacturing defect. Vessels with many kinds of minor manufacturing defects may well have been marketed, in some cases perhaps explicitly as seconds.

In the case of the Torre VIII/Porta di Nola materials we have been able to recognize two more or less distinct kinds of pottery with manufacturing defects: overfired pottery and irregularly fired pottery. We have also observed vessels that we suspect were underfired, although it remains difficult to demonstrate that this was the case with an adequate degree of certainty. Overfired pottery is marked by the fusion of the surfaces and also often the entire body, often by strong reduction of the entire wall or just its exterior surface, sometimes by bloating of the body, and sometimes by the formation of more or less pronounced cracks in the wall and/or the distortion or overall collapse of the form. Irregularly fired pottery has fired to a color different from the norm for its class, presumably due to loss of control of the firing process. Possibly underfired pottery tends to be softer than regularly fired pottery, may have a ceramic body displaying less developed oxidation, is relatively friable, and tends to lose its surface.

Vessels with defects that we inferred rendered them unusable for their originally intended purpose - such as pronounced deformation or bloating, cracking, or breakage (this last sometimes evidenced by the continuation of a surface firing effect such as reduction or fusion onto a fracture surface) - we classified as wasters. The presence of cracks in several of the fragments that we examined demonstrated that these were, in fact, wasters, rather than, for example, pottery that happened to have been subjected to high temperatures subsequent to manufacture, such as might occur in or around a metallurgical furnace.

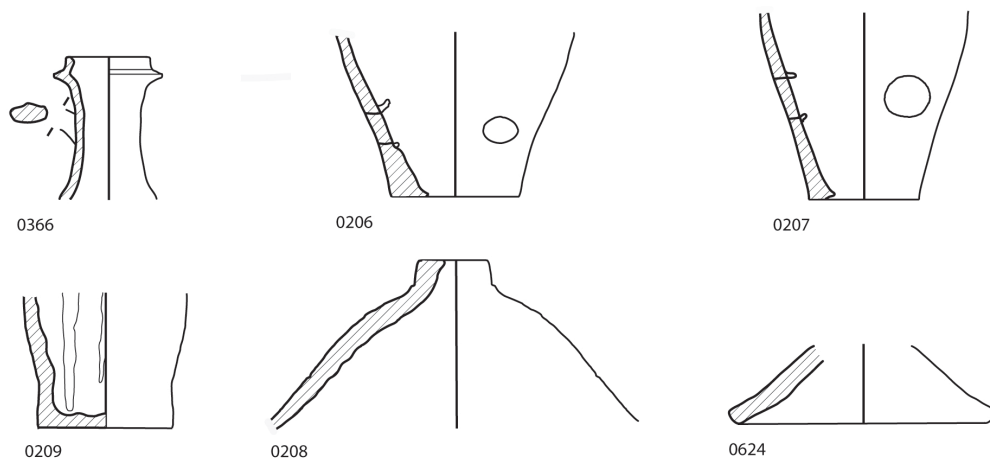
#### 4. The Tower VIII/Porta di Nola Pottery with Manufacturing Defects

We can now turn to a brief characterization of the three groups of pottery with manufacturing defects. Fragments are identified by the identification number assigned to them by PALHIP. Among these are eight of the ten fragments sampled by Morra's research group for compositional analysis, and in these instances the Morra sample number is also indicated. For the subset of these items given an identification number by the Università di Milano team (preceded by PN, for Porta di Nola) and the subset of these materials included in Romanazzi and Volontè's publication the relevant references are provided in a footnote. Figure 2 presents profile drawings of the fragments discussed, while Figure 3 presents photomicrographs of their ceramic bodies. Photographs are provided for several of the fragments with a view to illustrating the nature of the manufacturing defects represented among this group of materials.

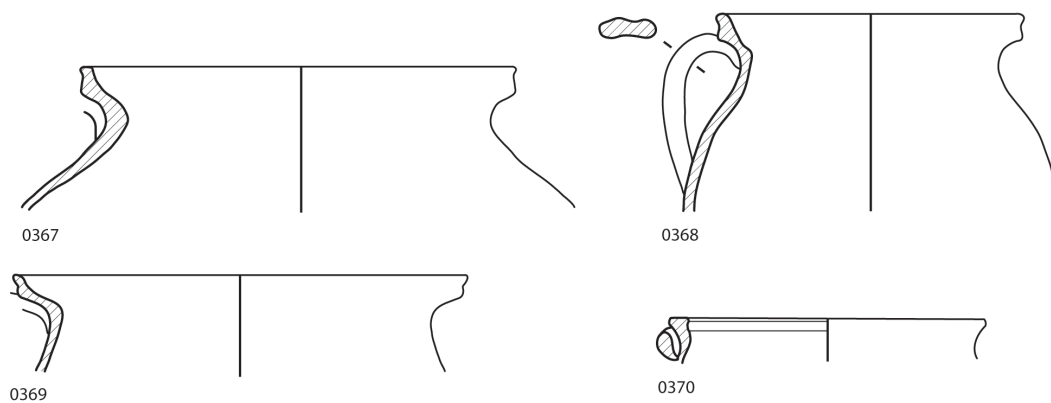
##### Group 1: Ferruginous coarseware:

This consists of utilitarian vessels in a coarse, ferruginous fabric. When regularly fired this fabric is characterized by a reddish matrix and sparse to abundant small to large inclusions

## GROUP 1



## GROUP 2



## GROUP 3

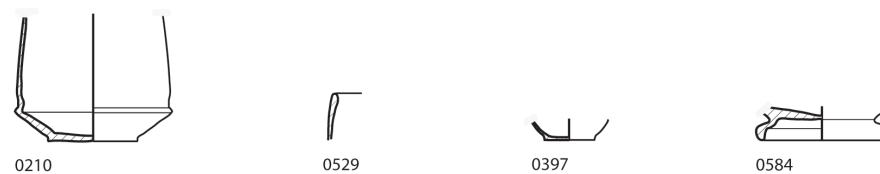
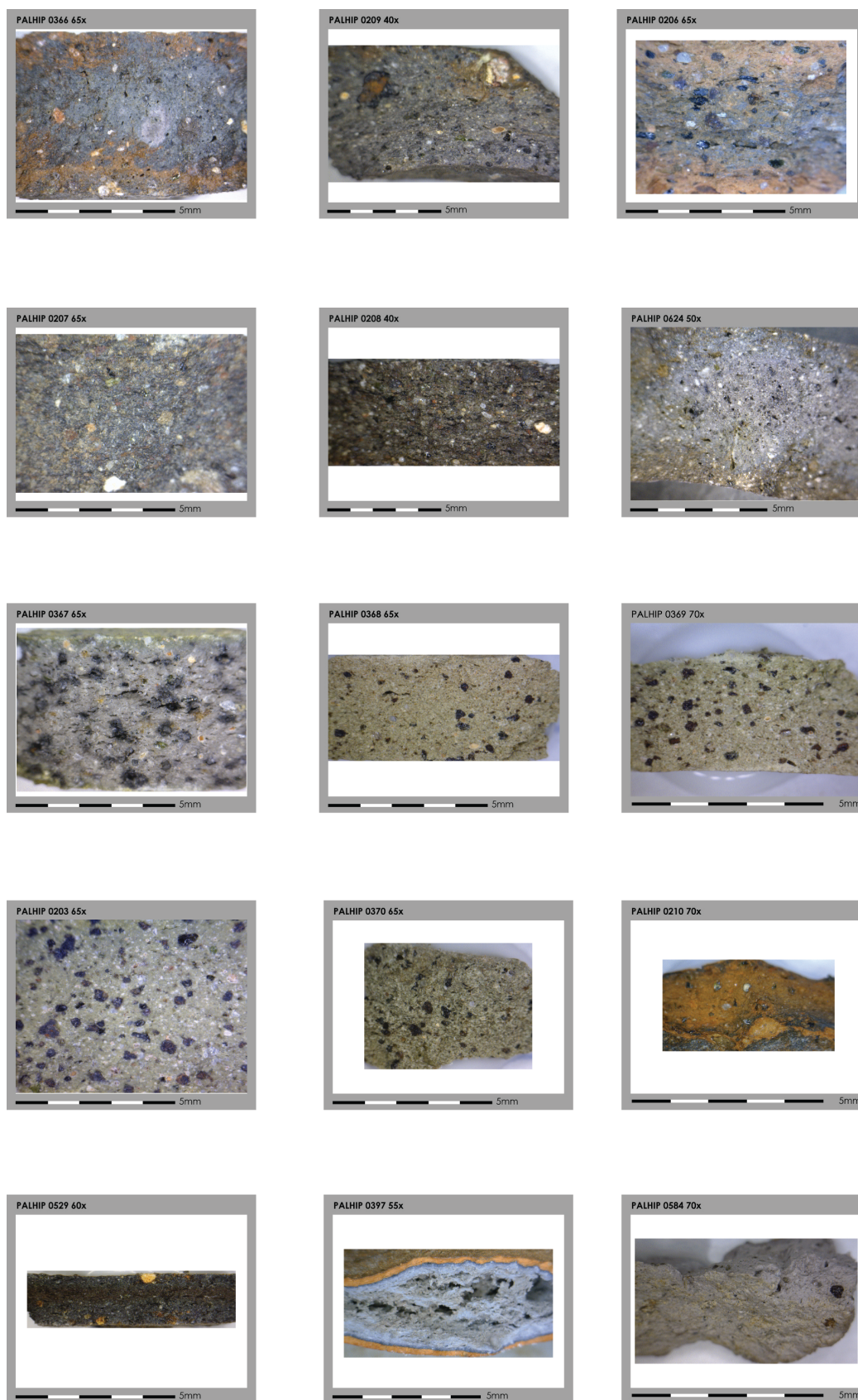


Figure 2: Profile drawings of fragments discussed in text. Scale 1:3.



*Figure 3: Photomicrographs of ceramic bodies of fragments discussed in text.*



consisting of grains of volcanic minerals and rock fragments. The vessel's exterior surface is sometimes covered by a whitish slip.

There are five forms attested:

Form 1: A bottle with a small flange below a straight rim and a thick strap handle. This can be generally classified as the Gasperetti Form 1262.<sup>5</sup> It is represented by a single fragment that is a waster (PALHIP 0366).<sup>6</sup> (fig. 4) This has a rim diameter of 3.8 cm, a reduced exterior surface, a highly fused body, two shrinkage cracks in the lower neck - one of which passes through the vessel wall and would have rendered it unusable for its intended purpose – and a handle that at its upper attachment is partially separated from the neck.

Form 2: A closed form, probably a jar or similar form, with a flat, base and steep lower wall. The exterior surface is covered with a whitish slip, with some drips of this also on the interior surface. This is similar to the Gasperetti Form 1211b, a jar, which is attested with a whitish slip in a similar fabric.<sup>7</sup> This is represented by a single irregularly fired fragment with a base diameter of 7.2 that has a reduced body (PALHIP 0209).



*Figure 4: PALHIP 0366: Two views showing crack in lower neck (right) and separation of upper handle attachment (left).*

<sup>5</sup> GASPERETTI 1996, pp. 40-44.

<sup>6</sup> = PN 510; ROMANAZZI AND VOLONTÈ 1986, p. 101, Tav. XXXII.2.

<sup>7</sup> GASPERETTI 1996, p. 28.



Figure 5: PALHIP 0208: Two views - exterior (left) and interior (right) - showing reduced and fused fabric and distorted wall.

Form 3: An *olla perforata* with a flat, irregular base with a hole at its center and at least three and perhaps four holes in the lower wall.<sup>8</sup> This is represented by two examples that are highly similar to one another and may have been fired in the same kiln load. The first, irregularly fired, has a base diameter ranging from 5.5 to 5.9 cm and lightly reduced surfaces (PALHIP 0206/Morra 2). The second, overfired, has a base diameter of 5.2 cm and a strongly reduced and highly fused body (PALHIP 0207/Morra 3).

Form 4: A large lid with an irregular pinched knob with a hole through it. This can be generally classified as the Gasperetti Form 1412b, and was probably meant to serve as the lid for a large jar.<sup>9</sup> This is represented by a single waster fragment that has a rim diameter that must have exceeded 17 cm. It is strongly reduced, heavily fused, and substantially distorted (PALHIP 0208/ Morra 4). (fig. 5)

Form 5: A small lid with a slightly thickened rim. This was probably meant to serve as the lid for a jar, such as Form 2, and may be a smaller version of Form 4. It is represented by a single overfired fragment - perhaps a waster - that has a rim diameter of 12 cm and is strongly reduced, extensively fused, bloated, and slightly deformed (PALHIP 0624).<sup>10</sup>

## Group 2: Porphyritic carbonate utilitarian ware

This group consists of utilitarian vessels in a porphyritic, carbonate fabric. When regularly fired this fabric is characterized by a fine, light matrix and sparse to frequent small to medium inclusions consisting of volcanic mineral grains. The vessel's exterior surface is sometimes covered with a pale brown to pale red slip.

There are two forms attested. In every case defects are the result of irregular firing that produced a somewhat greater than normal degree of fusion in the body and imparted to the vessel's surfaces a distinctive pale olive to pale yellow color. This discoloration is caused by the reaction of calcium and iron leading to the formation of calcium ferrosilicates, as can occur in a carbonate ceramic body when the firing reaches temperatures in excess of ca. 1000

<sup>8</sup> For *ollae perforatae* in the Vesuvian region see MACAULAY-LEWIS 2006, pp. 210-214.

<sup>9</sup> GASPERETTI 1996, p. 50.

<sup>10</sup> = PN 340.

degrees C.<sup>11</sup> While individual vessels with defects of this kind were apparently marketed with some degree of regularity in the Roman world, the occurrence of multiple examples belonging to highly similar vessels in association with multiple examples of other classes of pottery with manufacturing defects makes it all but certain that these vessels were discarded subsequent to their firing. Further, in some cases in which the surfaces of these vessels fired to a color distinct from that of the body, this effect continues onto breaks at the edge of the sherd, demonstrating that the vessel fractured during firing.

Form 6: A jar with an everted and upturned rim with a lid seating, at least one and possibly two vertical strap handles, and probably a flat base. In some cases the exterior surface is covered with a pale brown to pale red slip. This form is similar to the Gasperetti 1212c, although this was for the most part manufactured in a different fabric and was not slipped.<sup>12</sup> This form is attested by three vessels that all show substantial reduction and fusing of the body and pale olive to pale yellow surfaces, indicating that they are irregularly fired (PALHIP 0367/Morra 7; PALHIP 0368/Morra 8; PALHIP 0369). (fig. 6) The surface discoloration on one of these extends onto the break, indicating that it is a waster. These vessels, which have rim diameters of 14 cm, 21 cm, and 21 cm, are highly similar to one another and may well have been fired in the same kiln load. Also probably to be associated with these three vessels is a fragment of a flat base with a moderately steep lower wall that is substantially fused and reduced and has surfaces discolored a pale yellow (PALHIP 0203/Morra 1). (fig. 7) Here, too, the discoloration runs onto the break, indicating that the vessel is a waster. This fragment appears identical in fabric, colors, and forming details to the waster rim/handle fragment just noted, and both likely derive from the same vessel.

Form 7: A bowl or small basin with a hammerhead rim and one - and presumably two- horizontal handles. None of the form below the upper wall is attested. This is represented by a single irregularly fired fragment (PALHIP 0370).<sup>13</sup> It has a rim diameter of 15 and is discolored a pale olive gray.



*Figure 6: PALHIP 0367: View showing continuation of discoloration of surface onto break of handle attachment.*

<sup>11</sup> RICE 1987, p. 336.

<sup>12</sup> GASPERETTI 1996, p. 30.

<sup>13</sup> = PN 479; ROMANAZZI AND VOLONTÈ 1986, p. 99, Tav. XXVI.3.



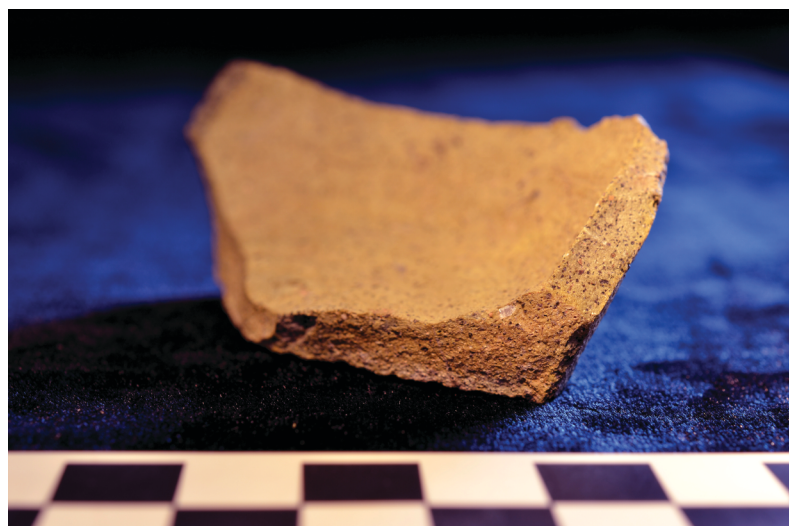


Figure 7: PALHIP 0203: View showing continuation of discoloration/fusion of surface onto break on wall. Note contrast between yellow-green color of original break on upper portion of wall and redder color of fresh break on base and lower portion of wall.

### Group 3: Gritty, ferruginous thin-walled ware

These materials come exclusively from *Cumuli* I, II, and III – we suspect entirely from *Cumulus* III. They are more abundant and present a substantially more complex picture than the materials associated with either Group 1 or Group 2. In some instances we have been able to identify substantial portions of multiple vessels that are highly similar one to another and that may have been underfired or overfired, and it seems likely that these were fired in the same kiln load.

At present we can assign three and perhaps four different forms to this group:

Form 8: A cylindrical beaker. This form, which can be classified as the Marabini XXXIV, has a simple, straight rim, a vertical upper/middle wall, a sharp carination, a low, sloping lower wall, and a flat base.<sup>14</sup> It is represented by fragments belonging to two waster vessels. One of these consists of two joining sherds that preserve the entire base and a substantial portion of the wall (PALHIP 0210/Morra 5).<sup>15</sup> (fig. 8) It has a base diameter of 4.3 cm. The base bears a small s-crack – a classic form of manufacturing defect – at the center that passes through the floor and would have rendered the vessel incapable of holding liquids.<sup>16</sup>

Form 9: A probable ovoid beaker. This form has a straight, slightly incurved rim. It is represented by a single overfired waster fragment (PALHIP 529/Morra 10). The diameter of the rim cannot be measured due to distortion, although it is clearly too small to belong to a bowl and thus presumably belongs to a beaker. It is strongly fused and reduced, with considerable distortion.

Form 10: An ovoid beaker. This form has a flat base and curved lower wall. It may be the same as Form 9. It is represented by a single overfired waster fragment that has a base diameter of 2.3 cm, a reduced core with pronounced bloating, and a crack that passes through

<sup>14</sup> MARABINI MOEVS 1973, p. 104.

<sup>15</sup> = PN 498, ROMANAZZI AND VOLONTÈ 1986, p. 104, Tav. XXXIX.3.

<sup>16</sup> For s-cracks see RICE 1987, pp. 68-69, 107; RYE 1981, p. 66.





*Figure 8: PALHIP 0210: Two views showing s-crack as visible on underside of base (left) and with light shining through it (right).*



*Figure 9: PALHIP 0397: Two views showing crack in underside of base (left) and bloating of wall and crack in interior of base (right).*

the floor and would have rendered the vessel incapable of holding liquids (PALHIP 0397).<sup>17</sup> (fig. 9)

Form 11: A bowl with a tall concavo-convex ring foot. It is represented by a single overfired waster fragment that has a base diameter of 6 cm and a reduced core with pronounced bloating (PALHIP 0584).<sup>18</sup> The firing effects displayed by this piece are similar those displayed by the example of Form 10 just described, and both vessels may have been fired in the same kiln load.

One additional fragment is worth presenting in connection with the materials just described. Refuse deposits from pottery workshops commonly contain items such as kiln furniture and fragments of kiln structure along with waster pottery. Among the materials examined was what may be one such item. This is a fragment preserving the entire base and lower wall

<sup>17</sup> = PN 249; ROMANAZZI AND VOLONTÈ 1986, p. 105, Tav. XXXIX.16.

<sup>18</sup> = PN 146; ROMANAZZI AND VOLONTÈ 1986, p. 105, Tav. XXXIX.20 (rather than Tav. XXXIX.17).



*Figure 10: PALHIP 0344: View showing probable paste incrustation on interior surface and break.*

from a ferruginous courseware jar/cookpot or similar form that bears a thick, coarse, hard, reddish incrustation on portions of its exterior surface, interior surface, and the intervening break (PALHIP 0344).<sup>19</sup> (fig. 10) This material is covered by a light-colored incrustation that formed during archaeological deposition, allowing us to infer that the reddish incrustation was deposited at some point between the initial breakage of the vessel to which it belonged and the sherd's definitive deposition. It has the appearance of fired paste of the kind employed to manufacture the Group 1 vessels, and it may well be a fragment that was incorporated into the structure of a kiln at the workshop at which these were produced.

## 5. Manufacture: Technology, Chronology, Organization, and Locus

We now turn to a consideration of the issues of the technology, chronology, organization, and locus of the manufacture of these materials.

With regard to the first of these issues, manufacturing technology, the production of Groups 1 and 3 presumably involved the use of clay of volcanic origin, with that employed for the manufacture of Group 1 perhaps fractioned to obtain a less coarse-textured material used for the manufacture of Group 3. The manufacture of Group 2, on the other hand, presumably involved the use of a marine clay with the addition of volcanic sand temper. These inferences have been confirmed in general terms by the program of compositional analysis conducted by Morra's research group. Deposits of volcanic clay derived from the argillification of material of Vesuvian origin were presumably available at one or more places in the environs of Pompeii, the specific locations of which are in practical terms impossible for us to determine on account of their possible localized nature and the fact that they are likely buried beneath thick deposits of ejecta from the eruption of AD 79. Such would not have been the case with marine clay, which must have been brought to Pompeii from some considerable distance. Likely sources are the outcrop of clay of this kind at Ogliara, ca. 3 km

<sup>19</sup> = PN 150; ROMANAZZI AND VOLONTÈ 1986, p. 102, Tav. XXXIII.9.

northeast of Salerno, which has been extensively exploited in modern times, and deposits that we can conjecture on geologic grounds exist somewhere on the Sorrentine Peninsula.<sup>20</sup>

So far as the chronology of the production of these vessels is concerned, we may first consider the overall dates for the deposition of the middens in which they were recovered. *Cumuli* I, II, and III appear to have been excavated as unitary features, that is, no discreet tips or other kinds of depositional were recognized within them at the time of their excavation, and, as already noted, we cannot at present distinguish between the sets of materials recovered in each of these. The materials recovered in *Saggio 2 Stratum I*, on the other hand, appear to have been subject to selection at the time of their excavation and consist entirely of large fragments of utilitarian wares and cookwares that cannot be dated with great precision. We can thus only present a highly generalized picture of the chronology of the formation of the four middens.

Romanazzi and Volontè's assertion that the materials from *Cumuli* I, II, and III consist overwhelmingly of materials dating to the Julio-Claudian and early Flavian period is clearly inaccurate, as the assemblage contains, for example, a very substantial amount black gloss ware dating to the later second and first centuries BC. Also present are large amounts of Italian Sigillata, Vesuvian Sigillata, thin-walled ware, and lamps that can be generally dated to the final quarter of the first century BC and the first half of the first century AD. The most probative evidence for the closing date of these features is provided by the Italian Sigillata. The forms with the latest beginning dates are the Conspectus 20.4 and 21.3, which begin no earlier than the second quarter of the first century AD and perhaps as late as the middle of the century.<sup>21</sup> While less probative, the complete absence of later Italian Sigillata forms and classes such as South Gallic Sigillata, glazed ware, and thin-walled ware manufactured by the workshop situated in the strip building in the Via dei Sepolcri outside the Porta Ercolano,<sup>22</sup> as well as *Firmalampen* and regionally manufactured imitations of this lamp type suggests that deposition ceased at some point well before AD 79. On the basis of this evidence we can infer that the production of the three groups in question need not have occurred any later than the second quarter of the first century, and might be considerably earlier than this, perhaps as early as the second half of the first century BC.

With a single exception the forms bearing manufacturing defects cannot be closely dated. The exception is Form 8, the Cylindrical Beaker, in Group 3, which Illuminata Faga has confirmed on the basis of the results of the Porto di Neapolis excavations was manufactured during the late first century BC and the early first century AD.<sup>23</sup> The other forms attested are not incompatible with this very broadly defined period of time.

With regard to the organization of the production of these materials, it seems entirely possible that a single workshop manufactured all three of the groups attested, employing three different pastes involving at least two different clays, turning out a widely variegated set of products aimed at a broad market. The chronological evidence for the manufacture of these materials does not preclude the possibility that they were manufactured by a single workshop operating over a period of perhaps just a generation or two. While it cannot be excluded that the production of these materials involved two or more workshops, in the absence of any

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<sup>20</sup> For the Ogliara clay outcrop see PEÑA AND MCCALLUM 2009, pp. 167-169 and the contributions in this volume by V. Morra and by A.M. De Francesco.

<sup>21</sup> ETTLINGER 1990, pp. 86-89.

<sup>22</sup> For this workshop and the thin-walled ware manufactured there see CAVASSA, LEMAIRE AND PIFFETREAU 2013; CAVASSA, LACOMBE AND LEMAIRE 2015.

<sup>23</sup> FAGA 2008, p. 646.

positive evidence to this affect it seems best to assume that they were manufactured by a single establishment.

So far as the locus of the materials' production is concerned, it seems likely that the two, or perhaps three or even four middens in which the materials in question were recovered consisted of mixed refuse dumped from the top of the wall. The material that wound up in these features presumably originated for the most part somewhere inside the town at no great distance from their locations. The density of materials with identifiable manufacturing defects in these deposits is decidedly modest in comparison with the levels attested for many off-site refuse deposits from pottery workshops that have been documented elsewhere in the Roman world. This suggests that these deposits do not represent the main locus for the discard of the refuse generated by the workshop in question. Given this observation, it seems likely that the middens lie somewhere near the edge of what we may think of as the halo of production refuse generated by this establishment, with very substantially larger amounts of this material winding up in one or more other locations.

The disposition of the four middens suggests that *Cumuli* I and II may have been produced in substantial measure by persons who gained access to Torre VIII along the street separating *Regio* IV *Insulae* 2 and 3, while *Cumulus* III and the *Saggio* 2 midden were produced by persons who gained access to the wall along the streets separating *Regio* IV *Insulae* 3 and 4 and *Regio* IV *Insulae* 4 and 5, respectively. We should thus look for the workshop that generated these three groups of pottery somewhere in the *insulae* just referred to, or perhaps those located immediately to the south of these across the Via di Nola, that is, *Regio* III *Insulae* 8, 9, 10, and 11. If, as has been conjectured, the pottery with manufacturing defects was recovered entirely in *Cumulus* III and the *Saggio* 2 midden, then we might wish to narrow this area somewhat, eliminating *Regio* IV *Insula* 2 and *Regio* III *Insula* 8 from consideration.

## 6. Conclusions

The analysis of the materials from the Università Statale di Milano excavations in the Torre VIII/Porta di Nola area has allowed the PALHIP team to identify the presence of a pottery workshop probably located somewhere in *Regio* IV or perhaps *Regio* III that manufactured coarse ferruginous utilitarian ware, porphyritic carbonate utilitarian ware, and ferruginous thin-walled ware for an undefined period of time during the later first century BC and/or the first half of the first century AD. The results reported here are preliminary, and further study of the materials may well allow us to identify additional vessels likely to be workshop products, expanding the range of forms and perhaps also fabrics and classes of pottery that we can infer were manufactured by this establishment.

This result sheds interesting new light on ceramic manufacture and perhaps craft production more generally at Pompeii during this period. By way of example, one can note that the activity of this workshop may have overlapped with that of the pottery workshop recently identified in *Regio* I, *Insula* 5, which manufactured cookware for some period of time during the first half of the first century AD.<sup>24</sup> While the evidence is admittedly quite slender, it may be that these two establishments focused on the manufacture of functionally distinct sets of products so as to limit the extent to which they found themselves in direct competition for a market of limited size and complexity.

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<sup>24</sup> CAVASSA 2009.

## Bibliographical Abbreviations

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 (editor), *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 (Collection du Centre Jean Bérard, 30), p. 95-104.

Cavassa, Lemaire and Piffeteau 2013 = L. Cavassa, B. Lemaire, and J.-M. Piffeteau, *Pompéi. L'atelier de potier Via dei Sepulchri, boutique NE, n. 29*, in *Chronique des activités archéologiques de l'École française de Rome* 2013, <https://cefr.revues.org/881>

Cavassa, Lacombe and Lemaire 2015 = L. Cavassa, A. Lacombe, and B. Lemaire, *Une production de gobelets à paroi fine à Pompéi en 79 de notre ère*, in *Société française d'étude de la céramique antique en Gaule. Actes du congrès de Nyon, 14-17 mai 2015*, Marseille, 2015, p. 285-292.

Chiaramonte Trerè 1986 = C. Chiaramonte Trerè (editor), *Nuovi contributi sulle fortificazioni pompeiane*, Milan, 1986 (Quaderni di Acme 6).

Ettlinger 1990 = E. Ettlinger (editor) *Conspectus formarum terrae sigillatae italico modo confectae*, Bonn, 1990 (Materialien zur Römisch-Germanischen Keramik 10).

Faga 2008 = I. Faga, *Ceramica a pareti sottili nella Campania romana tra età tardo-repubblicana e prima età imperiale. Nuovi data dal porto di Neapolis*, in L. Rivet and S. Saulnier (editors), *Société française d'étude de la céramique antique en Gaule. Actes du congrès de L'Escala-Empúries, 1er - 4 mai 2008*, Marseille, 2008, p. 643-654.

Gasperetti 1996 = G. Gasperetti, *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 de Narbonnaise (I<sup>er</sup> s. av. J.-C. II<sup>e</sup> s. ap. J.-C.) La vaisselle de cuisine et de table. Actes des Journées d'étude organisées par le Centre Jean Bérard et la Soprintendenza Archeologica per Le Province di Napoli e Caserta. Naples, 27-28 mai 1994*, Naples, 1996 (Collection du Centre Jean Bérard, 14), p. 19-63.

Macaulay-Lewis 2006 = E. Macaulay-Lewis, *The role of ollae perforatae in understanding horticulture, planting techniques, garden design, and plant trade in the Roman world*, in J.P. Morel, J. Tresserras, and J.C. Matamala (editors), *The archaeology of crop fields and gardens. Proceedings of the 1st Conference on crop fields and gardens archaeology, Barcelona (Spain), 1-3 June 2006*, Bari, 2006, (Studio, tutela e fruizione dei Beni culturali, 2) p. 207-219.

Marabini Moevs 1973 = M.T. Marabini Moevs, *The Roman thin walled pottery from Cosa (1948 - 1954)*, Ann Arbor, 1973 (Memoirs of the American Academy in Rome 32) (.

Peña 2014 = J.T. Peña, *The Pompeii Artifact Life History Project: conceptual background and first season's results*, in *Rei cretariae romanae fautorum acta* 43, 2014, p. 297-304.

Peña and Cheung 2015 = J.T. Peña, J.T. and C. Cheung, *The Pompeii Artifact Life History Project: conceptual basis and results of first three seasons*, in C. Gambardella (editor),



*Heritage and technology. Mind, knowledge, experience. Le Vie degli Mercanti XIII Forum Internazionale di Studi (Fabbrica della conoscenza 56)*, 2015, p. 2115-23.

Peña and McCallum 2009 = J.T. Peña and M. McCallum, *The production and distribution of pottery at Pompeii: a review of the evidence. Part 2: the material basis for pottery production and pottery distribution*, in *American journal of archaeology* 113.2, 2009, p. 165-201.

Rice 1987 = P. Rice, *Pottery analysis: a source book*, Chicago, 1987.

Romanazzi and Volontè 1986 = L. Romanazzi and A.M. Volontè, *Gli scarichi tra Porta Nola e la Torre*, in C. Chiaramonte Trerè (editor), *Nuovi contributi sulle fortificazioni pompeiane*, Milan, 1986 (*Quaderni di Acme* 6), p. 55-113.

Rye 1981 = O. Rye, *Pottery technology: principles and reconstruction*, Washington D.C., 1981 (*Manuals on Archaeology* 4).