

The Marmo al Mare Project 2013. Marble décor at the Roman Villas of *Stabiae*

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This article provides a preliminary report on the 2013 field season of the Marmo al Mare Project. The principal object of our project is to undertake the first comprehensive study of the lithic decoration for the most prominent elite houses within the Vesuvian area. In the first field season our efforts were focused on a survey of the overall marble-use at the Villa Arianna (and the so-called secondo complesso) and the Villa San Marco, including but not limited to marble thresholds, pavements and wall crustae. This report outlines our initial impressions of the marble décor at both villas, as well as our approach to the quantification of marble varieties and prestige levels.

Introduction

The aim of the Marmo al Mare Project¹ is to provide the first rigorous study of elite marble use in the Vesuvian cities², in order to enrich the understanding of the décor of seaside dwellings, while providing new reconstructions of their lithic decorative schemes and their changes over time. Further, we anticipate that determining the quarry identification of white and polychrome marbles used will expand our knowledge of the marble use within the area more generally, and of the overall marble trade within Italy during the period. This has necessitated the creation of new methodologies related to the quantification of marble varieties and prestige levels.

The short campaign carried out in May-June 2013 at the Villa Arianna (and the so-called *secondo complesso*, fig. 1) and the Villa San Marco (fig. 2) at *Stabiae* (modern Castellammare di Stabia) consisted of a preliminary identification of the overall marble-use at each villa, including but not limited to marble thresholds, pavements and wall *crustae*. This included an analysis of traces remaining in the mortar preparation layer, where both the imprints of marble slabs and a number of small *in situ* fragments could be identified. Although much of this stripping was carried out during the Bourbon explorations³, stripping seems also to have been carried out in the period prior to the eruption of AD 79. Nonetheless, there is fertile ground to explore through archaeological evidence both *in situ* and in storerooms. In addition, a survey of archival material in the form of notebooks assembled by Ruggiero in 1881 and d'Orsi in the 1950s will prove useful in determining ancient salvage activities⁴.

This study has also brought to light the need for a new method for recording and analyzing the use of marble in pavements with inserts, which occur not only at *Stabiae* but also in many of the houses at Pompeii and Hercu-

¹ The model for the current project is a recently completed study of the use of marble and other high-value stones at Villa A at Oplontis (modern Torre Annunziata) under the direction of the Oplontis Project. See BARKER and FANT "Lithic Decoration: Sources, Styles, Repair and Spoliation," and "Stone Sources and Types," forthcoming in vol. 2 of the University of Texas Oplontis Project publication in the American Council of Learned Societies Humanities E-book series.

² For an overall review of previous studies of marble use at Pompeii, see FANT 2007. For individual studies on public buildings and upper-class houses, see BRUNO *et al.* 2002; CANCELLIERE *et al.* 2002; FANT 2009; FANT *et al.* 2002; PEDRONI and STEINER 2012; PENSABENE 2005. For marble use at Pompeii and Herculaneum beyond elite use, see FANT and ATTANASIO 2009; FANT *et al.* 2013.

³ RUGGIERO 1881: V and especially entries for the months of April and May in 1761 (RUGGIERO 1881: 148-150), which record that marble pavements were removed for use in the Real Museo Borbonico (now the Museo Nazionale di Napoli).

⁴ RUGGIERO 1881; D'ORSI 1996.

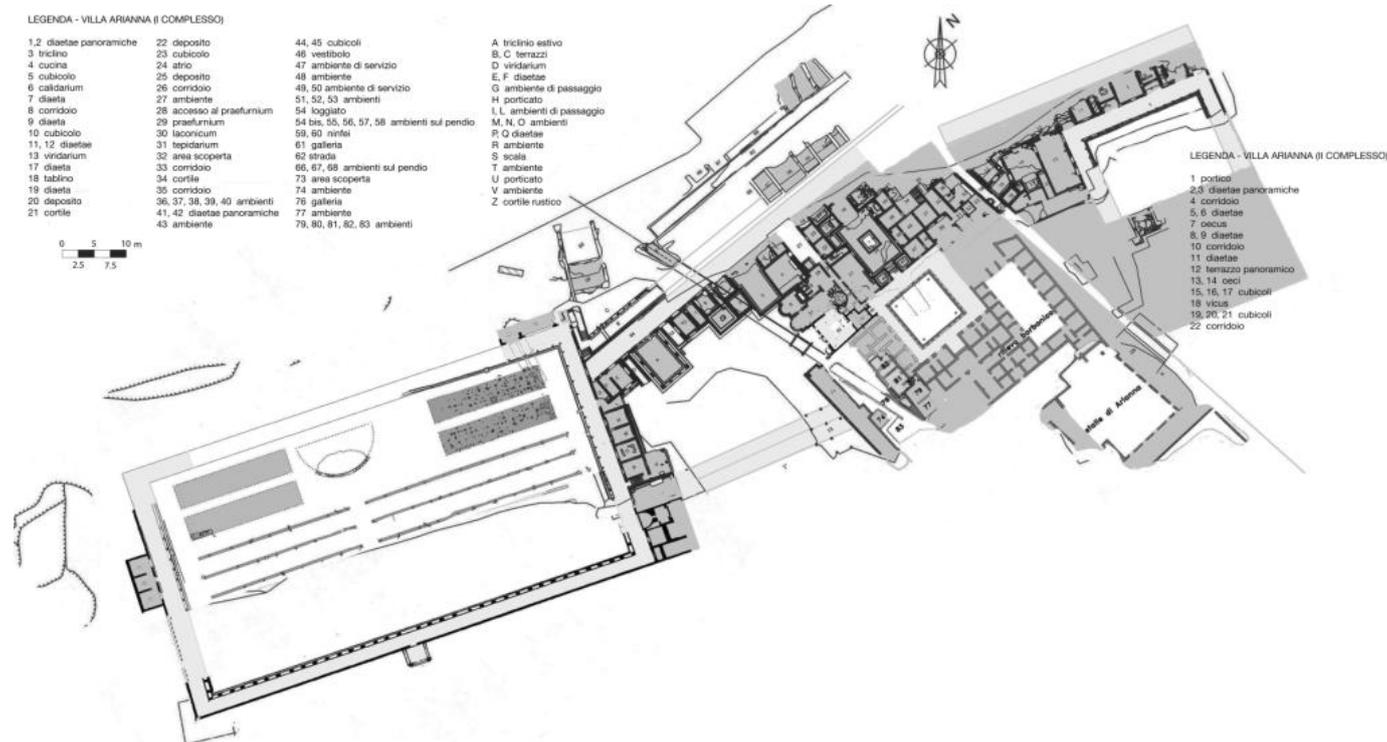


Fig. 1. Plan of the Villa Arianna, updated to 2008 (Courtesy of Thomas Howe).

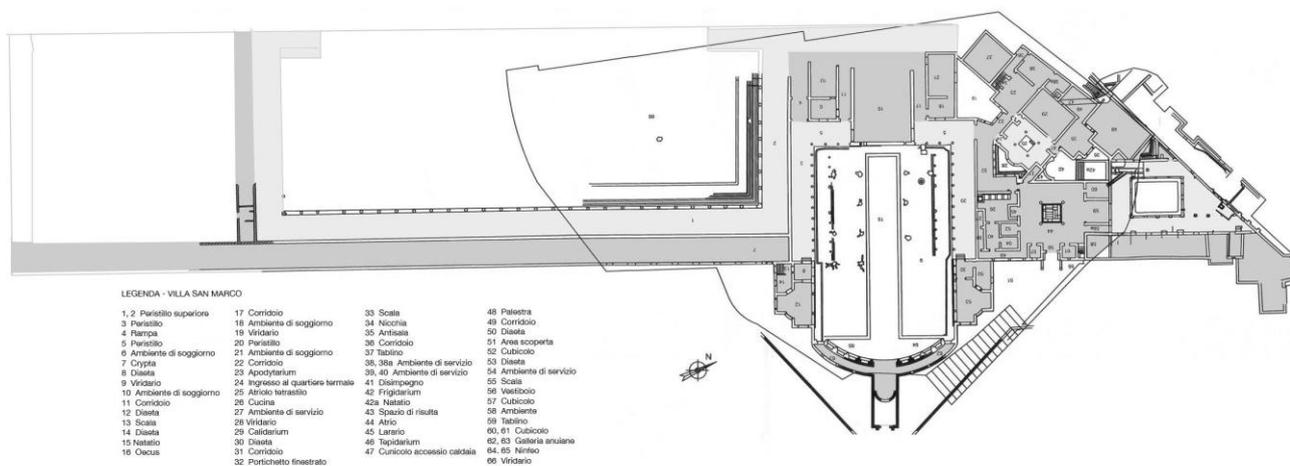


Fig. 2. Plan of the Villa San Marco, updated to 2008 (Courtesy of Thomas Howe).

laneum⁵ and are often only cursorily documented. Detailed recording of these floors – assessing the density, size and quality of pieces – makes it possible to identify differences within a single pavement as well as variation between pavements at different sites and from different periods. The results of this approach are presented below in an analysis of the pavement in Room M at the Villa Arianna along with a discussion of the factors underpinning the layout and design of such floors. The summary of this work will follow a brief introduction to the villas of Ancient Stabiae. The report will then conclude with an outline of the research goals of future field seasons and an overall review of the discoveries so far.

⁵ BLAKE 1930: 60.

The Villas of Ancient *Stabiae*

The site of ancient Roman *Stabiae* contains at least six enormous villas⁶ next to one another on the edge of a high sea cliff and represents the largest concentration of well-preserved *villae maritimae* in the Mediterranean world. The site was first explored in the Bourbon period between 1742 and 1782, and then reburied⁷. It was not until the 1950s under the direction of Libero d'Orsi that the site was rediscovered and partially re-excavated⁸. Further work has since been carried out over the last several decades⁹. Out of the six villas discovered three remain partially uncovered from the excavations of the 1950s: the Villa Arianna, the so-called *secondo complesso* and the Villa San Marco. The black-and-white mosaic pavements, along with painted wall decoration in the Second, early Third and Fourth Styles, date these structures from between the Republican period and 79 AD¹⁰. Much of the marble decoration at the villas belongs to construction phases in the Augustan and Claudian-Neronian periods, contemporaneous with the Third and Fourth Style work. The marble wall revetment in Room 24 of the Villa Arianna, for example, seems to have been installed at the same time as the room's transitional Third/Fourth Style decoration (just prior to the mid first century AD)¹¹.

The employment of marble at these villas is manifold. Both the Villa San Marco and the Villa Arianna feature pavements in *opus sectile*, walls of marble revetment, marble thresholds and windowsills, and at San Marco, a marble pool surround. The Villa Arianna also features a number of mosaic pavements with marble inserts and both villas contain painted imitation marble in their decoration. While certain aspects of these lithic programs have been the subjects of study, such as the pavements, mosaics¹² and the marble floors and wall decoration at San Marco¹³, the overall marble décor of these villas have never been studied holistically, in relation to one another or in relation to other contemporary luxury dwellings in the Vesuvian area – an oversight which this project seeks to address.

Pavements with marble inserts

In total three pavements with marble inserts are known at the Villa Arianna and are located in Rooms 3, 34-35-41, and M (no such pavements are attested at the Villa San Marco). The pavements are characterized by pieces of more or less irregular sizes and shapes inserted into a cement known as «*pavimento cementizio con inserti marmorei*», or are inserted into mosaic backgrounds of black or white, known as «*mosaici con inserti marmorei*».¹⁴ During the first field season, only two of these pavements were examined in detail: Rooms 34-35-41 and M. Although the pavement in Room 3 (c. 5.6 x 6.8 m) is the largest and grandest of this type at the Villa Arianna¹⁵, the decision was taken to leave this floor until the following season as the floor is in need of restoration. The floor in Rooms 34-35-41, which Pisapia has dated to the first century AD¹⁶, only partially survives due to later building phases. The marble insets in this floor are set into a mosaic consisting of a black field within thin, double white frames. These frames consist of three rows of square-laid tesserae. The tesserae, each of which measures c. 0.8 x 0.8 cm, thus we can classify the pavement as Grandi and Guidobaldi's «*mosaici a tessere piccole con inserti marmorei*»¹⁷.

⁶ The Villa Arianna is over 13,700 sq. m., the Villa del Pastore over 11,500 sq. m. and the Villa di San Marco over 6,000 sq. m.

⁷ BONIFACIO and SODO 2002; CAMARDO 2001b; CAMARDO and FERRARA 2001; LA VEGA *et al.* 1997; PAGANO 2005; PAGANO and PRISCIANDARO 2006; ROSSANO 2001.

⁸ D'ORSI 1996.

⁹ For details of recent excavations, see BONIFACIO 2008; 2009; 2011; 2013; CAMARDO 2001a; CAMARDO and FERRARA 2004: 83; ERISTOV and BLANC 2010; HOWE 2007; HOWE and GARDELLI 2013; HOWE *et al.* 2013; GARDELLI *et al.* 2013; RUFFO 2009a; 2010a; 2010b; TERPSTRA 2012; TERPSTRA *et al.* 2013.

¹⁰ ALLROGGEN-BEDEL 1977; 2002. BARBET 1985: 180, 183, 189, 190, 191, 192, 197, 212, 225, 247, 248, 249, 253, 262, 265 (on San Marco); MINIERO 1989.

¹¹ ALLROGGEN-BEDEL 1977: 76ff.; MINIERO 1989: 39; LING 1991: 76, 80, plate VIIA.

¹² PISAPIA 1989; 1999 AND 2002.

¹³ BARBET and MINIERO 1999. For the marble pavements, see BARBET 1999.

¹⁴ GRANDI and GUIDOBALDI 2006: 34-38, Tables 1 and 2. There has been much discussion on the name to be given to such pavements (cf. F. GUIDOBALDI 1995: 2-3). In Italian the term *cocciopesto* is widely used (cf. GIULLIANI 1992: 89-94 (with bibliography); BUGINI *et al.* 1994; SALVATORI 1994: 87-88; GRANDI CARLETTI 2001: 184-185, n. 2;). It also has been argued that the term 'pavimento cementizio' (cement pavement) should be used, specifying the characteristics (color, materials, etc.) of the floor, see GRANDI 2001: 193. Also, see BLAKE 1930: 23; DUNBABIN 1994: 30-31, n. 14. Blake's term *lithostroton* is no longer regarded as applicable. The term *opus scutulatum* comes from MORRICONE 1980: 5, 9-14 (cf. MORRICONE MATINI 1994), but has not been universally accepted (cf. DONDERER 1982). DUNBABIN 1999 uses the term *crustae-pavement*. Since the interpretations of ancient terms are extremely divergent, we simply label these floors as pavements with marble inserts (cf. BRUNEAU 1988: 52; F. GUIDOBALDI 1994: 455-456).

¹⁵ The mosaic pavement consists of a black field framed by two bands of white tesserae separated by three rows of black tesserae. Marble inserts include *pavonazzetto*, *giallo antico* and alabaster. The floor is dated to the first century AD. See PISAPIA 1989: 43, cat no. 84.

¹⁶ PISAPIA 1989: 42-43, cat no. 78.

¹⁷ GRANDI and GUIDOBALDI 2006: 35-38, Table 2.



Fig. 3. Villa Arianna, Room 34, pavement (Photo J. Clayton Fant).



Fig. 4a. Villa Arianna, Room M, pavement (Photo Simon J. Barker).

A census of the insert pieces in Rooms 41 and 34 showed that there were only a few marble varieties present and the placement of pieces was irregular. In Room 34 (fig. 3), we counted 8 pieces of *alabastro listato*, 8 white and white/orangey alabaster, 5 *portasanta*, 3 *giallo antico*, 2 grey, 2 *pavonazzetto*, and 1 slate. The parsimonious use of the fancier polychrome varieties and abundance of the plainer alabasters is consistent with the modest level of these rooms.

This field season allowed for a complete documentation of the floor in Room M, which was not included in Pisapia's 1989 catalogue. The main field is in cement with small, irregular-shaped white, grey and polychrome marble inserts, Grandi and Guidobaldi's «*cementizi a base fittile con inserti marmorei*»¹⁸ (fig. 4a & b). To test whether the selection of pieces and placement of varieties was random or deliberate we gridded the floor in squares of 2 Roman feet (40 in total). Inventory numbers were assigned to each piece of stone, while its type, dimensions and location within the square were noted and drawings were produced. Since the majority of the pieces were irregular, measurements were recorded for the greatest width and a measurement perpendicular to this width.

In total 241 marble inserts were identified, with an average size of 5.6 x 3.5 cm. Fig. 5 shows a breakdown of the white, grey and polychrome marbles used in the pavement, while fig. 6 shows the overall numbers of marble types employed. The pavement contains a relatively limited number of varieties: *giallo antico* (67), *portasanta* (50), *africano* (35), *pavonazzetto* (28), white (23), grey (19), *rosso antico* (9), alabaster (8), *verde antico* (1) and limestone (1). While it is clear that the pavement used a number of marble varieties, none of the 10 varieties displayed could be considered particularly unusual for central Italy in the 1st century AD. Even within the local context, there are similar pavements which include scarcer and more exotic materials. For example, the pavement in Room 9 of the Casa del Salone Nero at Herculaneum has a cement pavement with geometrically arranged inserts of a variety of marble types including white, Luna *bardiglio*, *africano*, *pavonazzetto*, *cipollino* and *porfido verde* – the latter in particular is not at all common in early imperial assemblages from Pompeii



Fig. 4b. Villa Arianna, Room M, detail of pavement (Photo Simon J. Barker).

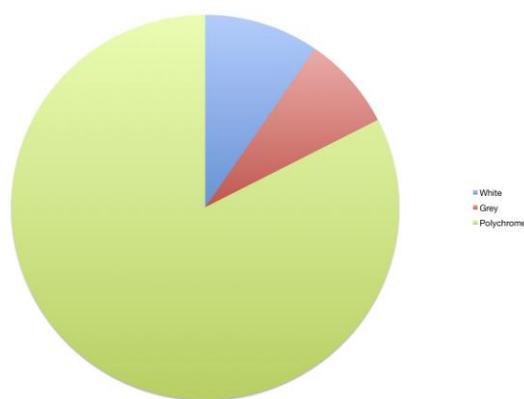


Fig. 5. Graph showing the breakdown of the proportion of white, grey and polychrome marbles used in pavement M, Villa Arianna (Drawing Simon J. Barker).

¹⁸ GRANDI and GUIDOBALDI 2006: 34-35, Table 1.

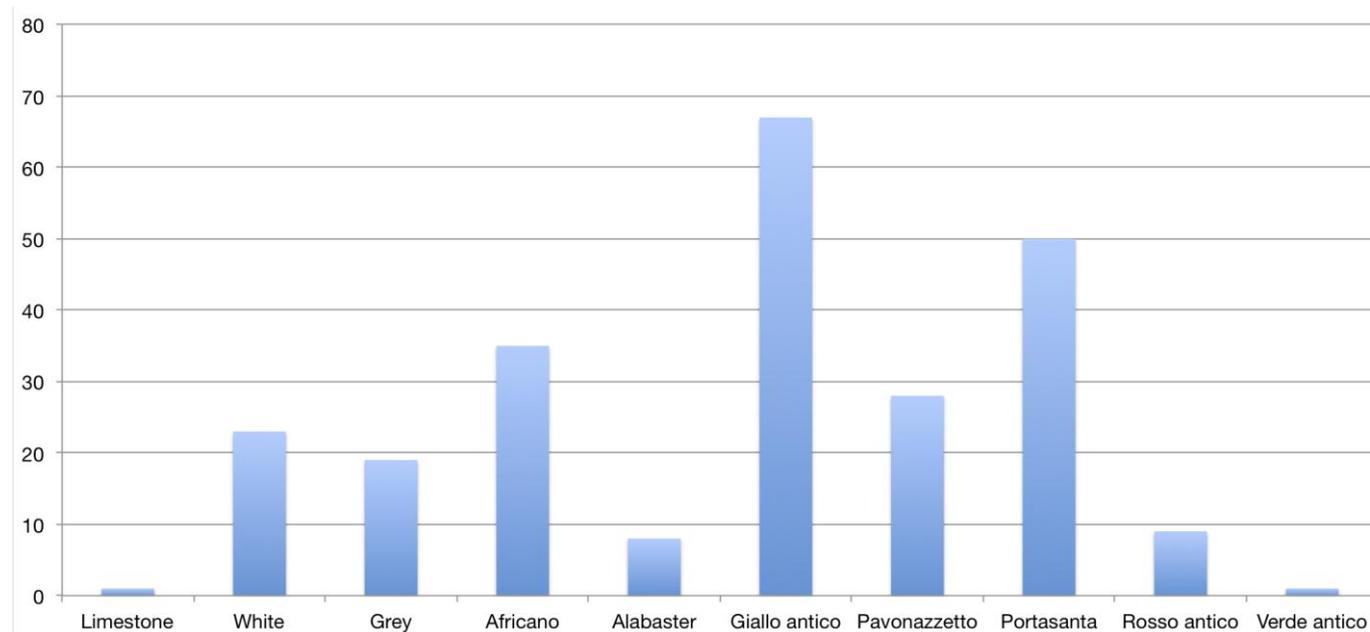


Fig. 6. Graph showing the overall marble types used in pavement M, Villa Arianna (Drawing Simon J. Barker).

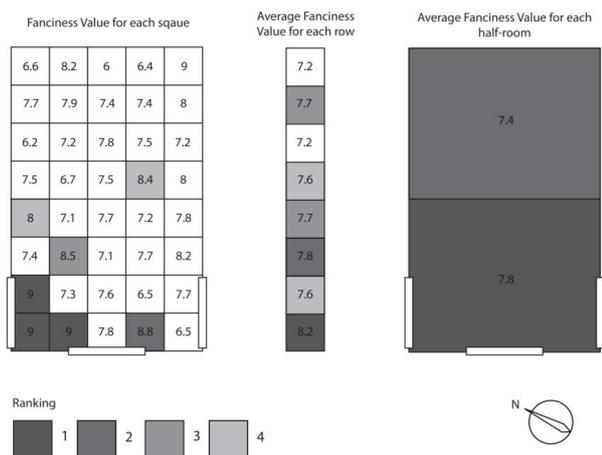


Fig. 7. Illustration of the two Roman ft. squares gridded on pavement M showing individual squares by Fanciness Value (Drawing Simon J. Barker).

or Herculaneum¹⁹. The marble-use in the pavement in Room M more closely resembles that in Rooms 6 and 14 of the Casa dei due Atri at Herculaneum, which have inserts of *pavonazzetto*, *cipollino*, Luna *bardiglio*, white, *giallo antico*, slate, and *greco scritto*.

The overall Fanciness Value²⁰ for the pavement in Room M is 7.6²¹. If we consider the breakdown of individual squares by Fanciness Value, total number of inserts, average size of pieces, predominance of marble types, and number of marble types per square, several patterns are noticeable. Firstly, the breakdown of Fanciness Value by squares, rows and floor half makes it clear that the fanciest squares are found in the NW corner of the room, and the fanciest squares in absolute terms are found in the 3 rows closest to the W side of the room where all three entrances are located (fig. 7). This may be due to the fact that any seating within the room likely would have been located at the E end of the room.

If the criterion is density, that is, the largest number of inserts for unit of area, the W side of the floor also shows preferential treatment, especially the

¹⁹ The pavement has been dated to the Augustan period; see PESANDO and GUIDOBALDI 2006a: 191.

²⁰ The qualitative difference in marble type can be illustrated with a metric we call, for want of a more formal term, the Fanciness Index. It attempts to quantify prestige and scarcity values of materials by variety on a scale of 1 to 10. While the authors acknowledge that the ancient concept of 'fanciness' is not likely to be an absolute, but rather depending to some extent on the period in question, the relative purchasing power of the customer, the purpose the marble was put to and whether it was being sourced directly from quarries or second-hand. It is nevertheless a useful tool to examine marble prestige levels. The list, which reflects the earlier imperial date and that we are dealing with the Vesuvian area, is as follows: 1 – terracotta; 2 – limestone, slate, other local material; 3 – white marble; 4 – grey marble; 5 – *greco scritto* and Cycladic white marbles; 6 – *alabastrò cotognino*, onyx, *rosso antico*; 7 – *cipollino*, *fior di pesco*; 8 – *breccia corallina*, *portasanta*, *breccia di Settebasi*, *breccia di Aleppo*; *alabastrò fiorito*; 9 – *pavonazzetto*, *giallo antico*, *africano*; 10 – granites, porphyries and other Eastern Desert igneous stones. For more on this, see FANT and ATTANASIO 2009.

²¹ The figure of 7.6 is an average of fanciness scores for all 241 inserts.

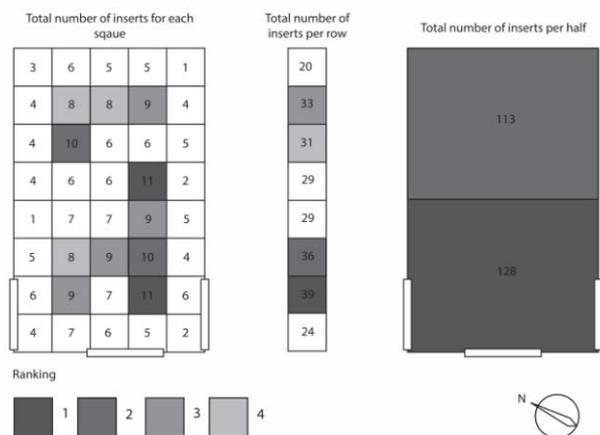


Fig. 8. Illustration of the two Roman ft. squares gridded on pavement M showing individual squares by number of inserts (Drawing Simon J. Barker).

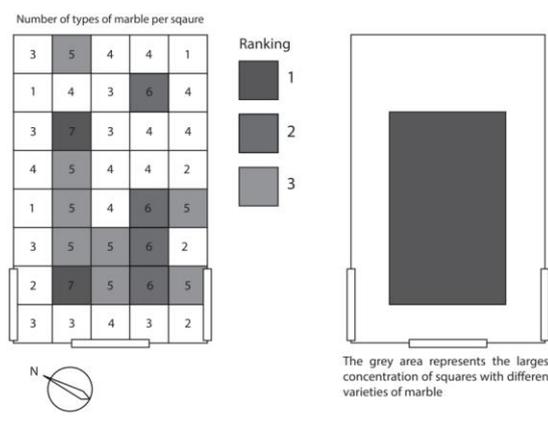


Fig. 9. Illustration of the two Roman ft. squares gridded on pavement M showing individual squares by number of marble type(s) (Drawing Simon J. Barker).



Fig. 10. *Secondo Complesso*, Room 13 (Photo Simon J. Barker).

central area of the W side of the pavement (fig. 8). Finally, the largest individual pieces seem to be located predominantly in the W side of the room. A similar pattern can be seen in the number of marble types per square (fig. 9). It is clear that the squares with the highest number of marble varieties are located towards the W side of the room with the greatest concentration in the lower central area of the floor.

From this analysis we can identify a number of individual modalities available to the mosaicist in planning the layout of the pavement: variety of marble, insert density, and size of individual inserts. An important suggestion thus emerges that the craftsmen that laid the pavements did not place inserts randomly, but rather with concern for the above factors. The pavement in Room M at the Villa Arianna shows how these factors were deployed in the lower central area of the floor in order to maximize the impact of its marble inserts on visitors who dined in or

passed through this space. While these differences are worth noting, it is the contrast between floors in the same structure and between structures that should provide the most enlightening results²². Moreover, it is the ultimate goal of this project to collect comparable data from Pompeii and Herculaneum in order to place these floors within a wider socio-economic context.

The opus sectile floors of the *Secondo Complesso*

The two *opus sectile* pavements in the so-called *secondo complesso* were stripped of their marble decoration. Only one of the pavements remains visible, that in Room 13; the pavement, in exedra 19 is indicated on La Vega's plan²³. The large squares of giallo antico and slate that make up this floor can be reconstructed since after its removal it was reinstalled in Room 142 of the *Museo Ercolanese*²⁴, where it remains today.

Room 13 (fig. 10) had an open N side with views across the Bay toward Naples and large windows on the E opening onto peristyle 7, which has been only partially excavated. Room 13, with a floor area of 72 m², is amongst

²² It is hoped that as the dataset of pavements with inserts increases we will be able to compare this rating against different pavements in the same dwelling, pavements in different dwellings, those with different main fields (i.e. mosaic and cement), and within a single pavement.

²³ Ruggiero 1881: tav. V.

²⁴ PISAPIA 2002: 111-112.

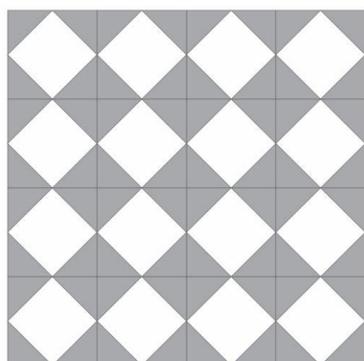


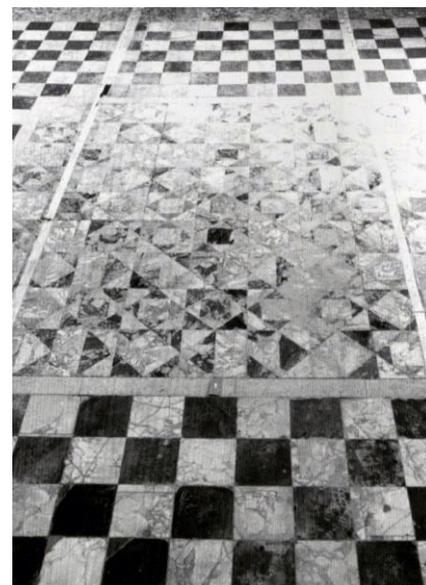
Fig. 11. *Secondo Complesso*, Room 13, *opus sectile* motif Q2 (Drawing Simon J. Barker).

Fig. 12. *Secondo Complesso*, Room 13, *in situ portasanta* triangles (Photo Simon J. Barker).



Fig. 13. *Secondo Complesso*, Room 13, *in situ pavonazzetto* triangle (Photo Simon J. Barker).

Fig. 14. *Opus sectile* pavement from Room 13 in the *Secondo Complesso* re-laid in Room 142 at the Museo Ercolanese (After Pisapia 2002, 112, fig. 5).



the largest of the eight rooms in Campania that feature wall-to-wall *opus sectile* paving²⁵. All of the marble has been stripped from the floor, but the pattern can be recovered from imprints in the mortar bedding and details provided by Ruggiero²⁶. The pavement was excavated by Weber in 1762 and partly stripped to pave a room in the *Museo Reale di Portici*²⁷ (now the *Museo Ercolanese* in the Reggia di Portici). Later, in 1775, the room was re-excavated and the remaining marble from the pavement and the room's marble threshold was stripped to pave one of the rooms in the *Real Museo Borbonico* (now the Museo Nazionale di Napoli)²⁸.

The pavement's motif is Guidobaldi's Q2, which consists of squares containing oblique squares surrounded on all four corners by triangles (fig. 11)²⁹. Two fragments of triangles in *portasanta* remain *in situ* on the W wall next to the original grey marble (probably Luna *bardiglio*) border (fig. 12), along with a fragment of a *pavonazzetto* triangle in the same vertical row of squares (fig. 13), but towards the N wall. This border survives for almost the entire length of the wall and in the NW corner of the N wall. The reconstruction floor in the *Museo Ercolanese* indicates that the panels either had a central square in *portasanta* and triangles in *pavonazzetto* or a central square of *pavonazzetto* and triangles in *portasanta* (fig. 14). This floor also features a border in *cipollino*, which must also have been used in Room 13 but does not survive. It is therefore clear that the pavement consisted of rows with central

²⁵ *Opus sectile* floors stretching from wall to wall are rare beyond several wealthy houses at Herculaneum and Pompeii. Examples include, the Casa dei Cervi (IV.21), the Casa del Rilievo di Telefo (Ins. Or. 1.2-3) and the Casa dell'Atrio a Mosaico (IV.1-2) at Herculaneum and the Casa di Fabio Rufo at Pompeii, see FANT 2007: 340. A further three floors with wall-to-wall *opus sectile* have been brought to light in recent excavations carried out from 1999 onwards by M.P. Guidobaldi, D. Esposito and E. Formisano at Herculaneum. These floors are in a room in a residential complex located in Insula I (area ISAH b = Insulae Settentrionali), a room in the lower terrace of the same building (area ISAE q), and a room in a monumental terrace belonging to the Villa dei Papiri (area VPSO a = Villa dei Papiri area Sud-Ovest), see M.P. Guidobaldi *et al.* 2012a: 55, fig. 8, 82 and 159-160, fig. 122. Villa A at Oplontis also features two wall-to-wall pavements (Rooms 78, 69).

²⁶ RUGGIERO 1881: 179.

²⁷ ALLROGGEN-BEDEL and KAMMERER-GROTHAUS 1980: 200.

²⁸ The floor was located on the first floor of the Museo Nazionale di Napoli, but has subsequently been removed, see PISAPIA 1989: 55, cat. no. 104; 2002: 111-112.

²⁹ F. GUIDOBALDI 1985: 183. Also see, PISAPIA 1989: 54, cat. no. 104.



Fig. 15. Secondo Complesso, Room 13, original opus sectile pavement level (Photo Courtney A. Ward).



Fig. 16. Villa Arianna, Atrium 24, dado (Photo J. Clayton Fant).

panels of *portasanta* and triangles of *pavonazzetto* in between alternating rows with central panels of *pavonazzetto* and triangles of *portasanta*. Pisapia dated the pavement to the first half of the first century AD³⁰ and the most comparable floor of this size with the same motif is exedra 69 at Villa A, Oplontis, although it should be noted that the motif was common in antiquity³¹.

During this season the floor was cleaned to reveal the original mortar bedding. The overall imprint is badly preserved, but portions are still clearly visible in various sections of the floor. We also found a dense compacted deposit of marble fragments towards the middle of the room and next to the W Wall. In the hope of discovering more about the types of materials used, the decision was taken to remove the fragments, which by chance brought to light the remains of what seems to have been an earlier pavement (fig. 15). The fragments were in *pavonazzetto*, *portasanta*, *africano*, *giallo antico* and grey marble; the most frequent was *pavonazzetto* with a total of 46 fragments. The majority had defined edges and polished surfaces³² and were either squares or triangles from the pavement, presumably abandoned during Bourbon spoliation.

More importantly the discovery of a seemingly earlier pavement helped explain the noticeable level difference between the N and S ends of the floor in Room 13. In the NE corner of the room, for example, the imprint in the mortar bedding clearly shows that the same motif as the rest of the room, but c. 10 cm below the room's marble border. This border runs around the entire length of the room at the height of the second floor level. From the extant imprints two phases of flooring can be inferred. The S end of the room contains the remnants of the second pavement (which corresponds to the marble border), while the N end retains the same pattern but at a lower level. It seems likely that the N side of the floor, closest to the edge of the escarpment, had subsided at some point after its original construction and that the pavement was then taken up and re-laid so as to restore the floor to its original form. It is hoped that this working hypothesis will be fully confirmed next field season through a more thorough analysis of the floor.

Marble wall revetment at the Villa Arianna

A number of rooms at the Villa Arianna had marble wall revetment, including Rooms 6 and 31 in the thermal complex, which still retain a few *in situ* fragments and imprints of the original slabs. The S wall of Room 6, for example, retains a fragment of *cipollino* belonging to the dado. Although these rooms were not documented in detail during this field season, in future seasons we will strive to reconstruct the original scheme in both rooms.

The grandest wall revetment in the villa was located in the atrium, room 24. The room is paved with a black and white Second Style mosaic featuring black bias-laid tesserae and white diamond inserts³³; the simple floor design provides a sharp contrast to the later addition of rich marble wall decoration and Third Style frescoes³⁴. The marble decoration consists of a dado of warm white marble with large crystals (which rules out an Italian provenance) (fig. 16), partially preserved in the NW ala and one stretch of the E wall, and in mortar impressions generally³⁵.

³⁰ PISAPIA 1989: 54-55, cat. no. 104.

³¹ F. GUIDOBALDI 1985: 183-187; GUIDOBALDI and OLEVANO 1998: 233-235.

³² On the criteria used for the classification of marble slabs, see F. GUIDOBALDI 1991: 132-139, fig. 69; ANGELELLI 2000: 88-101; GUIDOBALDI and ANGELELLI 2002: 155-163.

³³ PISAPIA 1989: 38, cat no. 70.

³⁴ The marble and wall decoration were installed at the same time. The Third Style scheme shows no signs of having been cut into in order to add the marble decoration.

³⁵ It appears that the marble revetment may have been removed in antiquity rather than in the course of the Bourbon excavations. Ruggiero records a note from Alcubierre dated to October 24th 1761, which states that the room was found with its marble decoration already removed with only a few fragments of marble remaining, see RUGGIERO 1881: 162.



Fig. 17. *Secondo Complesso*, Limestone threshold in Room 7 (Photo J. Clayton Fant).



Fig. 18. *Secondo Complesso*, Room 13, East windowsill (Photo J. Clayton Fant).

The dado rises 22cm, is 11cm thick at the largest measurable point and is surmounted by a frame of *cipollino* 9.5 cm high and 3cm thick. This frame is preserved at a single point on the NW wall. Above this, mortar impressions indicate the presence of a large panel. The most likely composition of the wall revetment is a scheme with a dado with a *cyma reversa* moulding in white non-Italian marble, with large panels of an unknown marble in *cipollino* frames above. The use of large framed panels is comparable to the wall revetment in *diaeta* 78 at Villa A, Oplontis³⁶, and in the Casa del Rilievo di Telefo at Herculaneum³⁷. The total height of the revetment was c. 1.25 m in the atrium (24) and c. 2m in Room 18, which connects the atrium to the panoramic terrace beyond. The total circumference of the revetment, not including Room 18, is 44.7m, making the atrium one of the largest marble-revetted rooms in Campania³⁸. Although the revetment was stripped in antiquity, the job was not complete, and it is possible that fragments of the upper panels may be found in the storerooms.

Marble thresholds and windowsills at Arianna and San Marco

In the *secondo complesso*, the Villa Arianna proper, and the Villa San Marco, the great majority of threshold blocks are of white marble. Although a number of thresholds and windowsills are modern replacements due to Bourbon spoliation³⁹, a number of original examples, especially thresholds, still survive *in situ*⁴⁰. We documented in detail all thresholds in the first two buildings and surveyed those of the Villa San Marco - none was visually inconsistent with the characteristics of Luna marble. Since sections of the villas were built at different dates, many of the marble thresholds in older areas were replaced; however, some older limestone blocks were left in place, probably because of their venerable quality, such as a limestone threshold in Room 7 of the *secondo complesso* (fig. 17) or that of the *fauces/vestibulum* of the Villa Arianna's atrium.

Luna marble was also used for the windowsills of the large panoramic windows common in mid-Julio-Claudian construction. These were mostly spoliated, but traces remain of their original size. In Room 13 of the *secondo complesso*, hasty removal led to the breakage of the sides of sills (fig. 18) where they ran under the walls (indicating that they were laid before higher courses of brick were set). Similarly, in the Villa Arianna's *oecus* 3, bricks in the same location were cut out in order to free entire sill slabs; in fig. 19 this is visible at right.

³⁶ The scheme was a dado in *breccia corallina* surmounted by a torus moulding, with the central zone composed of three panels of an unknown marble (ca. 55 x 100 cm), with *breccia corallina* frames and a thinner torus moulding in *breccia corallina* directly beneath the wooden revetment, see CLARKE and BARKER forthcoming.

³⁷ The wall revetment can be seen in *oecus* 21 and Room 18 ('Salone dei marmi'), see M.P. GUIDOBALDI 2006; GRANDI and GUIDOBALDI 2005; M.P. GUIDOBALDI *et al.* 2012b: 308-311.

³⁸ Marble wall revetment can be seen in a small number of private houses in addition to those mentioned above, such as in *oecus* 62 of the Casa di Fabio Rufo (VI.17 [Ins. Occ.]. 16-19), *exedra* 46 of the Casa dei Dioscuri (VI.9.6) and the Casa di Apollo (VI.7.23) at Pompeii, and Rooms 16, 29 and 42 at the Villa San Marco (Stabiae); see FANT 2007: 340; M.P. GUIDOBALDI *et al.* 2012a: 160, 173; M.P. GUIDOBALDI *et al.* 2012b: 308-311.

³⁹ See D'ORSI 1996: 163 (4th March 1954), 170 (13th April 1954).

⁴⁰ See D'ORSI 1996: 173 (26th April 1954), 184 (25th June 1954). Our survey indicates that there are twenty marble thresholds still *in situ* in the *secondo complesso* and Villa Arianna.



Fig. 19. Villa Arianna, Room 3, modern windowsill replacement. The restored sill is shorter than the original marble.



Fig. 20. Villa San Marco, windowsill, Rooms 25-28 (Photo J. Clayton Fant).

Future seasons

Our intent for 2014 is to study the thermal complex of the Villa Arianna and to make a detailed survey of *diaeta* 3 with its marble insert pavement. This large floor in a major room will be an appropriate field test of the hypothesis that the placement of individual marble pieces was shaped not only by the marble types but also by the dynamics of the room. At the same time we will seek fragments in the storerooms, which may be correlated to the module of floors now stripped and so suggest color schemes, particularly for Rooms 6 and 31 of the thermal complex and Room R of the large garden peristyle. In addition, we will further investigate the pavement in Room 13 of the *secondo complesso*. Our overall aim with *opus sectile* floors and marble wall revetment is to create a plausible reconstruction in digital form.

We will also seek to take samples of two kinds of white marble which are, visually, not white Luna marble: the dado of atrium 24 and the sills of the panoramic windows on the N side of the garden along the hillside, which are not numbered on present plans. In addition, if samples of the original pool surround from San Marco can be located in the storerooms we will also potentially seek to test these. Provenance analysis will be carried out via stable isotopic analysis, electron spin spectroscopy and petrography, which will allow the best possibility of identifying the quarry provenance of these marbles and thus their contextualization among imported white marbles.

In addition, at the Villa San Marco we will further explore the vast (ca. 20 x 20m) *opus sectile* floor of the great panoramic *diaeta* (Room 16), as well as the *frigidarium* (29) and the *tepidarium* (42a) of the baths. As at the Villa Arianna, we hope to create reconstructions of the marble décor in digital form. We also intend to produce a full catalogue of all surviving marble fragments in storerooms at both villas and conduct a full analysis of all archival material (photographic and written) related to marble decoration and imitation marble decoration at both villas⁴¹. The *lararium* (45) in the atrium (44) of the Villa San Marco, for example, is entirely decorated in imitation marble. At the Villa Arianna, *finto marmo* of the Second Style appears in Room 45 and two statue bases in Room T, which we believe to be unique in Campania. It is our aim to document and catalogue the types of imitated marble and contextualize them within the existing Vesuvian examples. This should then allow for a complete analysis of the lithic decoration at both villas and their contextualization with regard to other seaside dwellings in the Vesuvian area. Our next aim will be the study of the most comparable seaside dwellings at Pompeii and Herculaneum in order to provide new understanding of marble use in elite houses in the Vesuvian area.

Preliminary conclusions

The ancient villas of *Stabiae* show a significant use of marble, but it is not clear to what degree this began with the original construction of these villas. At *Stabiae*, much of our earlier evidence for marble use comes from thresholds and insert pavements; however, neither villa preserves evidence like that which remains in Villa A at Oplontis, built c. 50 BC, which shows that every room in the original core had alabaster thresholds.

It is clear at *Stabiae* that with the updates in frescoes in Third and Fourth Style during the first century AD we also see a significant influx of marble. This not only included *opus sectile* floors on a palatial scale, but several

⁴¹ On this subject, see FANT 2007.

rooms with marble wall revetment. If the wall revetment in the atrium (24) at the Villa Arianna belongs, as we believe, to the transitional Third Style décor of the room, its marble decoration featuring *cipollino* and non-Italian marble (a distinction from Villa A which uses only Luna marble for architectural decoration) must have been amongst the first examples within the dwellings of the Vesuvian area. Similarly, Room 13 at the Villa Arianna, with views overlooking both the coast and Vesuvius, was paved with a remarkably large composition of *opus sectile*. Its design was not only large but also rich in materials with squares and triangles of *pavonazzetto* and *portasanta*.

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BIBLIOGRAPHY

- ALLROGGEN-BEDEL A., 1977, 'Die Wandmalereien aus der Villa in Campo Varano (Castellammare di Stabia)', *Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung*, 84: 27-89.
- ALLROGGEN-BEDEL A., 2002, 'Gli scavi borbonici nelle Ville Stabiane: Pitture antiche e gusto settecentesco', in G. BONIFACIO, A. M. SODO (eds.) *Stabiae: storia e architettura : 250o anniversario degli scavi di Stabiae 1749-1999: convegno internazionale, Castellammare di Stabia, 25-27 marzo 2000*, Roma: 102-107.
- ALLROGGEN-BEDEL A., KAMMERER-GROTHAUS H., 1980, 'Das Museo Ercolanense in Portici', *Cronache Ercolanesi*, 10: 175-217.
- ANGELELLI C., 2000, 'Villa romana di Cazzanello – Lastre marmoree da rivestimento: nota preliminare', *Annual Reports of Institute of Cultural Exchange*, 13: 88-101.
- BARBET A., 1999, *La peinture murale romaine. Les styles décoratifs pompéiens*, Paris.
- BARBET A., 1999, 'Caractéristiques des mosaïques,' in A. BARBET, P. MINIERO (eds.), *La Villa San Marco a Stabia*, Napoli: 377-378.
- BARBET A., MINIERO, P. (eds.), 1999, *La Villa San Marco a Stabia*, Napoli.
- BLAKE M.E., 1930, 'The Pavements of the Roman Buildings of the Republic and Early Empire', in *Memoirs of the American Academy in Rome*, 8: 7-159.
- BONIFACIO G., 2008, 'Ufficio Scavi di Stabia. Castellammare di Stabia: indagini archeologiche nell'area del pianoro di Varano', in *Rivista di Studi Pompeiani*, 18: 197-200.
- BONIFACIO G., 2009, 'Ufficio Scavi di Stabia', in *Rivista di Studi Pompeiani* 19: 155-157.
- BONIFACIO G., 2011, 'Ufficio Scavi di Stabia. Notiziario 2009', *Rivista di Studi Pompeiani* 21: 171-175.
- BONIFACIO G., 2013, 'Ufficio Scavi di Stabia, Attività 2011,' in *Rivista di Studi Pompeiani* 22: 197-198.
- BONIFACIO G., SODO A.M., 2002, *Stabiae: storia e architettura : 250o anniversario degli scavi di Stabiae 1749-1999: convegno internazionale, Castellammare di Stabia, 25-27 marzo 2000*, Roma.
- BRUNEAU PH., 1988, 'Philologie mosaïstique', *Journal des savants* 3-4: 3-73.
- BRUNO M., CONTI L., PENSABENE P., TURI B., 2002, 'Pompeii after the AD 62 earthquake: historical, isotopic, and petrographic studies of quarry blocks in the Temple of Venus', in J.J. HERRMANN JNR., N. HERZ, and R. NEWMAN (eds.), *ASMOSIA 5. Interdisciplinary Studies on Ancient Stone*: London: 282-288.

- BUGINI R., D'AGOSTINI C., SALVATORI A., 1994, 'Tecnologia edilizia e indagini mineralogico-petrografiche di pavimenti in "cocciopesto" di età classica in area romano-campana', in G. BISCONTIN (ed.), *Calcestruzzi antichi e moderni: storia, cultura e tecnologia: atti del convegno di studi, Bressanone 6-9 Luglio 1993*, Padova: 265-274.
- CAMARDO D., 2001a, 'La riscoperta di Stabia negli scavi negli anni Cinquanta', in D. CAMARDO, A. FERRARA (eds), *Stabiae dai Borbone alle ultime scoperte*, Castellammare di Stabia: 69-72.
- CAMARDO D., 2001b, 'La Villa di Arianna a Stabia', in D. CAMARDO, A. FERRARA (eds), *Stabiae dai Borbone alle ultime scoperte*, Castellammare di Stabia: 74-83.
- CAMARDO D., FERRARA A., 2001, *Stabiae dai Borbone alle ultime scoperte*, Castellammare di Stabia.
- CAMARDO D., FERRARA A., 2004, *Tesori di Stabiae: arte romana sepolta dal Vesuvio = Treasures from Stabiae: Roman art buried by Vesuvius*, Castellammare di Stabia.
- CANCELLIERE S., LAZZARINI L., and TURI B., 2002, 'White marbles and coloured stones in the House of Polibius at Pompeii', in J.J. HERRMANN JNR., N. HERZ, and R. NEWMAN (eds.), *ASMOSIA 5. Interdisciplinary Studies on Ancient Stone*, London: 301-307.
- CLARKE J.R., BARKER, S.J., forthcoming, 'Evidence for Wooden Wall Revetment and Marble Decoration in Diaeta 78 at Villa A ("of Poppaea") at Oplontis (Torre Annunziata, Italy)', in *XIIe Colloque de l'association Internationale pour de la Mosaïque Antique* (Venice 11-15 September 2012).
- DONDERER M., 1982, 'Recensione a M. L. Morricone, *Scutulata pavimenta*, Roma, 1980,' in *Archeologia Classica* 34: 230-234.
- D'ORSI L. (ed. A. CAROSELLA), 1996, *Gli scavi Stabiae giornale di scavo*, Ministero per I Beni Culturali ed Ambientali Soprintendenza Archeologica di Pompei Monografie 11, Roma.
- DUNBABIN K.M.D., 1994, 'Early Pavement Types in the West and the Invention of *Tessellatum*', in P. JOHNSON, R. LING, D. J. SMITH (ed.), *Fifth International Colloquium on Ancient Mosaics* (Bath, 5-12 September 1987), *Journal of Roman Archaeology Supplement Series*, no. 9, Ann Arbor: 26-40.
- DUNBABIN K.M.D., 1999, *Mosaics of the Greek and Roman world*, Cambridge.
- ERISTOV H., BLANC N., 2010, 'Peintures et stucs des villas de Stabies: bilan des recherches et nouveaux projets', *Rivista di Studi Pompeiani*, 20: 158-160.
- FANT J.C., 2007, 'Marble real and painted (imitation) at Pompeii', in J.J. DOBBINS and P. FOSS (eds.), *The World of Pompeii*, New York and Abingdon: 336-346.
- FANT J.C., 2009, 'White marbles in the summer triclinium of the Casa del Bracciale d'Oro, Pompeii', in Y. MANIATIS (ed.), *ASMOSIA VII (BCH Supplement 51)*, Athens: 53-57.
- FANT J.C., ATTANASIO D., 2009, 'Bars with marble surfaces at Pompeii: evidence for sub-elite marble use', *Associazione Internazionale di Archeologia Classica (AIAC), Fasti On Line, FOLD&R Italy Series no. 159*.
- FANT J.C., CANCELLIERE S., LAZZARINI L., MARTINEZ M., TURI B., 2002, 'White marble at Pompeii: sampling the Casa dei Vettii', in L. LAZZARINI (ed.), *Interdisciplinary Studies on Ancient Stone. ASMOSIA VI*, Padua: 309-315.
- FANT J.C., RUSSELL B.J., BARKER S.J., 2013, 'Sub-elite marble use and re-use at Pompeii and Herculaneum: the evidence from the bars', *Papers of the British School at Rome* 68: 1-29.
- GARDELLI P., BUTYAGIN A., GHISTOV D., ERSHOVA A., FIORE I., 2013, 'Relazione preliminare sulle due campagne di scavo, restauro e rilievo 2010 e 2011 promosse dal Museo Statale Ermitage/Fondazione RAS presso il sito di Villa Arianna a Stabiae', in *Rivista di Studi Pompeiani* 22: 209-215.
- GIULLIANI C.F., 1992, 'Opus signinum e cocciopesto', in G.M. DE ROSSI (ed.), *Segni I* (Quaderni del Dipartimento di Scienze dell'Antichità, Università di Salerno, 11), Napoli: 89-94.
- GRANDI CARELETTI M., 2001, 'Opus signinum e cocciopesto: alcune osservazioni terminologiche', in A. PARIBENI (ed.), *Atti del VII Colloquio dell'Associazione italiana per lo studio e la conservazione del mosaico: Pompei, 22-25 marzo 2000*, Ravenna: 183-198.
- GRANDI M., 2001, 'Riflessioni sulla cronologia dei pavimenti cementizi con decorazione in tesserae', in F. GUIDOBALDI, A. PARIBENI (eds.), *Atti del VIII Colloquio dell'Associazione italiana per lo studio e la conservazione del mosaico: Firenze, 21-23 febbraio 2001*, Ravenna: 71-86.
- GRANDI M., GUIDOBALDI F., 2005, 'La decorazione in opus sectile della Casa del Rilievo di Telefo a Ercolano', in C. ANGELELLI (ed.), *Atti del X Colloquio dell'Associazione italiana per lo studio e la conservazione del mosaico: (Lecce, 18-21 febbraio 2004)*, Tivoli (Roma): 183-198.
- GRANDI M., GUIDOBALDI F., 2006, 'Proposta di classificazione dei cementizi e mosaici omogenei ed eterogenei', in C. ANGELELLI (ed.), *Atti dell'XI Colloquio dell'Associazione italiana per lo studio e la conservazione del mosaico: (Ancona, 16-19 febbraio 2005)*, Tivoli (Roma): 31-38.
- GUIDOBALDI F., 1985, 'Pavimenti in opus sectile di Roma e dell'area romana. Proposte per una classificazione e criteri di datazione', in P. PENSABENE (a cura di), *Marmi Antichi: problemi d'impiego, di restauro e d'identificazione*, Roma: 171-233.
- GUIDOBALDI F., 1991, 'Lastre marmoree', in I. BRAGANTINI (ed.) *Ricerche archeologiche a Napoli: lo scavo di Palazzo Corigliano 1*, Napoli: 132-139.
- GUIDOBALDI F., 1994, 'Sectilia pavimenta: la produzione più antica in materiali non marmorei o misti', in R. FARIOLI CAMPANATI (ed.), *Atti del I Colloquio dell'Associazione Italiana per lo Studio e la Conservazione del Mosaico*

- (Ravenna, 29 Aprile - 3 Maggio 1993), Ravenna: 451-471.
- GUIDOBALDI F., 1995, 'Per la strutturazione di una nuova terminologia convenzionale per la individuazione tipologica dei pavimenti antichi', in *BolIAISCOM* 2: 2-3.
- GUIDOBALDI F., ANGELELLI C., 2002, 'Frammenti di lastre da opus sectile come materiali di scavo: criteri di individuazione, classificazione ed edizione', in *Atti del XVIII Convegno Internazionale Scienza e Beni Culturali "I Mosaici. Cultura, Tecnologia, Conservazione"*, Bressanone, 2-5 Luglio 2002, Padova: 155-163.
- GUIDOBALDI F., OLEVANO F., 1998, 'Sectilia pavimenta dell'area vesuviana', in P. PENSABENE, A. I PÉREZ ALVAREZ (eds.), *Marmi antichi. II. Cave e tecnica di lavorazione, provenienza e distribuzione*, Roma: 223-240.
- GUIDOBALDI M.P., 2006, 'La Casa del Rilievo di Telefo. Considerazioni sulla storia edilizia di una domus aristocratica ercolanese', *Ostraka*, 15: 31-47.
- GUIDOBALDI M.P., ESPOSITO D., FORMISANO E., 2012a, 'L'Insula nord-occidentale a la Villa dei Papiri di Ercolano una sintesi delle conoscenze all luce delle recenti indagini archeologiche', in *VESUVIANA: An International Journal of Archaeological and Historical Studies on Pompeii and Herculaneum* 1: 43-180.
- GUIDOBALDI M.P., ESPOSITO D., PEDICINI L., 2012b, *Ercolano: colori da una città sepolta*, Verona.
- HOWE T.N., 2007, 'Current work, 2007', in P. G. GUZZO, G. BONIFACIO, A. M. SODO (eds.), *Otium ludens. Stabiae – at the heart of the Roman Empire*, Castellammare di Stabia: 103-112.
- HOWE T.N., GARDELLI P., 2013, 'Stabia, attivit. Fondazione Restoring Ancient Stabiae', in *Rivista di Studi Pompeiani* 22: 199.
- HOWE T.N., GLEASON K., SUTHERLAND J., 2013, 'Stabiae, Villa Arianna: scavi e studi nel giardino del Grande Peristilio, 2007-2011', in *Rivista di Studi Pompeiani* 22: 205-208.
- LA VEGA F., LA VEGA P., PAGANO M., 1997, *I diari di scavo di Pompei, Ercolano e Stabia di Francesco e Pietro La Vega: 1764-1810: raccolta e studio di documenti inediti*, Roma.
- LING R. 1991, *Roman Painting*, Cambridge.
- MINIERO P., 1989, *Stabiae. Pitture e stucchi delle ville romane*. Catalogo della monstra (Soprintendenza Archeologica di Pompei. Le Mostre 7), Napoli.
- MORRICONE M.L., 1967, *Mosaici Antichi in Italia, Regione Prima: Palatium*, Roma.
- MORRICONE M.L., 1980, *SCUTULATA PAVIMENTA*, Roma.
- PAGANO M., 2005, *I primi anni degli scavi di Ercolano, Pompei e Stabiae: raccolta e studio di documenti e disegni inediti*, Roma.
- PAGANO M., PRISCIANDARO R., 2006, *Studio sulle provenienze degli oggetti rinvenuti negli scavi borbonici del Regno di Napoli: una lettura integrata, coordinata e commentate della documentazione*, Castellammare di Stabia.
- PEDRONI L., SSTEINER A., 2012, 'Marmi e pietre lavorate dalla casa di N. Podidius Priscus a Pompei: rapport preliminare', *VESUVIANA: An International Journal of Archaeological and Historical Studies on Pompeii and Herculaneum* 4.
- PENSABENE P. 2005, 'Marmi e committenza negli edifici di spettacolo in Campania', *Marmora* 1: 69-143.
- PESANDO F., GUIDOBALDI M.P., 2006a, *Gli ozi di Ercole: residenze di lusso a Pompei ed Ercolano*, Roma.
- PESANDO F., GUIDOBALDI M.P., 2006b, *Pompei, Oplontis, Ercolano, Stabiae*, Guide Archeologiche Laterza, Roma-Bari.
- PISAPIA M.S., 1989, *Mosaici antichi in Italia. Regione prima, Regione prima*. Mosaici Antichi in Italia 7, Roma.
- PISAPIA M.S., 1999, 'Pavimenti', in A. BARBET, P. MINIERO (eds.), *La Villa San Marco a Stabia*, Napoli: 97-84.
- PISAPIA M.S., 2002, 'I Mosaici del Secondo Complesso al Museo Nazionale di Napoli', in G. BONIFACIO, A. SODO (eds.), *Stabiae: storia e architettura : 250. anniversario degli scavi di Stabiae 1749-1999: convegno internazionale, Castellammare di Stabia, 25-27 marzo 2000*, Roma: 109-118.
- ROSSANO P., 2001, 'Le Esplorazioni settecentesche all'ombra di Vesuvio', in D. CAMARDO, A. FERRARA (eds.), *Stabiae dai Borbone alle ultime scoperte*, Castellammare di Stabia: 17-22.
- RUFFO F., 2009, 'Sulla topografia dell'antica Stabiae. Osservazioni sulla Villa di San Marco e sul cosiddetto impianto urbano alla luce delle recenti indagini archeologiche (2008-2009)', *Oebalus. Studi sulla Campania nell'Antichità* 4: 235-271.
- RUFFO F., 2010a, 'Stabiae: Villa San Marco e l'impianto urbano alla luce delle recenti indagini archeologiche. Osservazioni preliminary', *Rivista di Studi Pompeiani*, 20: 87-102.
- RUFFO F., 2010b, 'L'insula sud-occidentale del cosiddetto 'impianto urbano' di Stabiae. Nuovi dati dalla recente campagna di scavo (2009)', *Oebalus. Studi sulla Campania nell'Antichità* 5: 177-238.
- RUGGIERO M., 1881, *Degli Scavi di Stabia dal MDCCLIX al MDCCLXXXII*, Napoli.
- SODO A., 2001, 'I rinvenimenti recenti: nuovi ambienti in luce a Villa Arianna', in D. CAMARDO, A. FERRARA (eds.), *Stabiae dai Borbone alle ultime scoperte*, Castellammare di Stabia: 85-87.
- SODO A., BONIFACIO G., 2001, *Stabiae, Guida Archeologica alle Ville*, Castellammare di Stabia.
- TERPSTRA T., TONIOLO L., GARDELLI P., 2013, 'Campagna di scavo APAHA 2011 a Villa San Marco, Stabiae: Relazione preliminare sull'indagine archeological', in *Rivista di Studi Pompeiani* 22: 199-204.
- TERPSTRA T., 2012, 'The 2011 Field Season at the Villa San Marco, Stabiae: Preliminary Report on the Excavations, *Fasti On Line, FOLD&R Italy Series no. 259*.