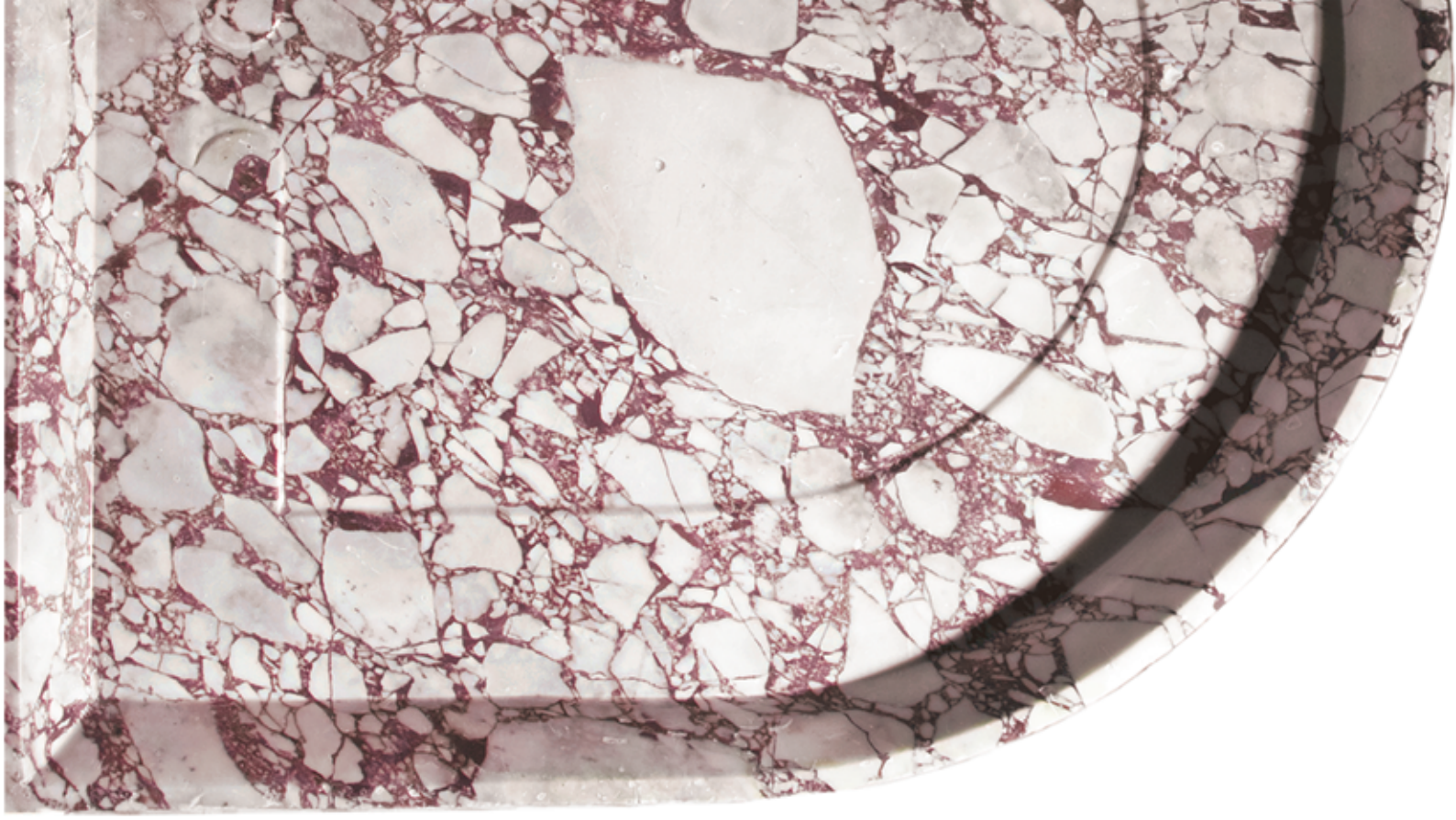
First Remarks about the Pavement of the Newly Discovered Mithraeum of the Colored Marbles at Ostia and New Investigations on Roman and Late Roman White and Colored Marbles from Insula IV, ix

David, Massimiliano; Succi, Stefano; Turci, Marcello



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CONTENT

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FIRST REMARKS ABOUT THE PAVEMENT OF THE NEWLY DISCOVERED MITHRAEUM OF THE COLORED MARBLES AT OSTIA AND NEW INVESTIGATIONS ON ROMAN AND LATE ROMAN WHITE AND COLORED MARBLES FROM INSULA IV, IX

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Abstract

This paper focuses on the latest research about the marble fragments found during the archaeological investigations carried out since 2007 by the Department of History and Cultures of the University of Bologna, within the Ostia Marina Project, here presented as a continuation, deepening and updating of the contribution made at Asmosia Conference X (2010). Investigations continued fruitfully over the years and led to a further expansion of the excavated area, with the addition to the thermal complex named the "Silenus Baths" (sector A), of new structures from sector B, among which the significant discovery of a new *mithraeum* stands out, referred to as being "of the colored marbles". The *spelaeum* of this *mithraeum* still preserves the nearly intact pavement made with many different types of reused marble. Technical and archaeological investigations of the pavement are here presented, as well as the results of the quantitative and qualitative analysis of the marbles.

Keywords
ancient Ostia, roman marbles, mithraeum of the colored marbles

1. Introduction

Since 2007 the Department of Archaeology (now of History and Cultures) of the University of Bologna has been carrying out a new range of archaeological investigations at Ostia, the harbor of Rome, in cooperation with the Soprintendenza al Colosseo, al Museo nazionale romano e all'area archeologica di Roma of the Italian Ministry of Cultural Heritage. Research focused on block IV, ix, in the so-called 'district outside Porta Marina', an only marginally dug area along the via di Cartilio Poplicola in 1930s, and again along the via della Marciana in 1970s.

The site has been divided into two areas of investigation (Fig. 1). In the A sector a public thermal building has been identified, achieved in the Hadrianic age (the thirties of the 2nd century AD) and conventionally called the "Silenus Baths"[1]. The complex covers an estimated area of about 2000 square meters. In the B sector the excavations were carried out in a late Hadrianic age block called the Building of Two Staircases erected in the south-east corner, where a comprehensive stratigraphic sequence that goes from the first half of the first century to the first half of the fifth century AD was brought to light[2]. In 2014 the investigations were extended to the north of the B sector, where in a large open area, north of the Building, a series of walls belonging to a previously unknown complex of buildings has been found (IV, ix, 5).

M.D. – M.T.

2.1. The marbles from Ostia Marina Project: a work in progress

During the investigations of the Ostia Marina Project many marble fragments of different types and qualities have been found, belonging to a wide morphological range. All the marbles from US 0 (*humus*) were subjected to statistical and quantitative-distributive analysis, already presented in ASMOSIA Conference X held in Rome in 2012[3]. The total number of marbles found up to 2012 amounts to roughly 3000 units (2936 units, Fig. 2); the analyses of the materials found in 2013 and 2014 are currently in progress, but, on the basis of an estimate, the total number of marbles seems to be almost double (about 6000 units).

1 DAVID 2013, 229–236.

2 DAVID *et al.* 2014.

3 DAVID, SUCCI, TURCI 2015, 93–102.

Fig. 1. Ostia, general plan. The A and B areas of the excavation (insula IV, ix) (elab. by M. Turci)

Architectural and sculptural elements are scarcely present (1% of the total of the marbles found, 31 units). Most of the white marble items come from the Silenus Baths. The archaeological analysis of the *natatio* of the Silenus Baths *frigidarium* (room no. 7) provide evidence of the massive use of marble for the vertical cladding, completely destroyed by being removed during the renovation works of the 4th century AD; the presence of these cladding elements is proved, on the walls, by the holes for housing the anchoring metal cramps and, on the walls of the *natatio*, by the imprints of large slabs 0.70 m high, preserved in the installation mortar. As regards to the decorative elements of the room, some fragments of *rosso antico* with vegetal elements (small palms and flowers) in bas-relief are documented, found in the filling of the *natatio* and probably belonging to the first phase of the decoration (a reconstruction attempt at the decorative scheme has been presented at ASMOSIA X)[4]. Among the architectural elements, it has been possible to recognize, still *in situ*, the Corinthian order of the tripartite entrance on the south side of the *natatio,* originally surmounted by arches and composed of Corinthian capitals and composite bases with plinths in Luna marble, and smooth columns stems in Cipollino[5]. Regarding the white marbles, currently ongoing is archaeometric analysis of a sample of selected specimens in order to define the mineral-petrographic features and to identify the quarries of provenance.

M.D. – S.S. – M.T.

2.2. Statistical analysis (Fig. 2)

2.2.1. Cladding elements

Among the morphological types of cladding elements, in 74% of the finds (2193 fragments) the presence of *crustae* is clearly dominant. Also significant

4 DAVID, SUCCI, TURCI 2015, 102, fig. 15.

5 DAVID, SUCCI, TURCI 2015, 99–102, fig. 11–13.

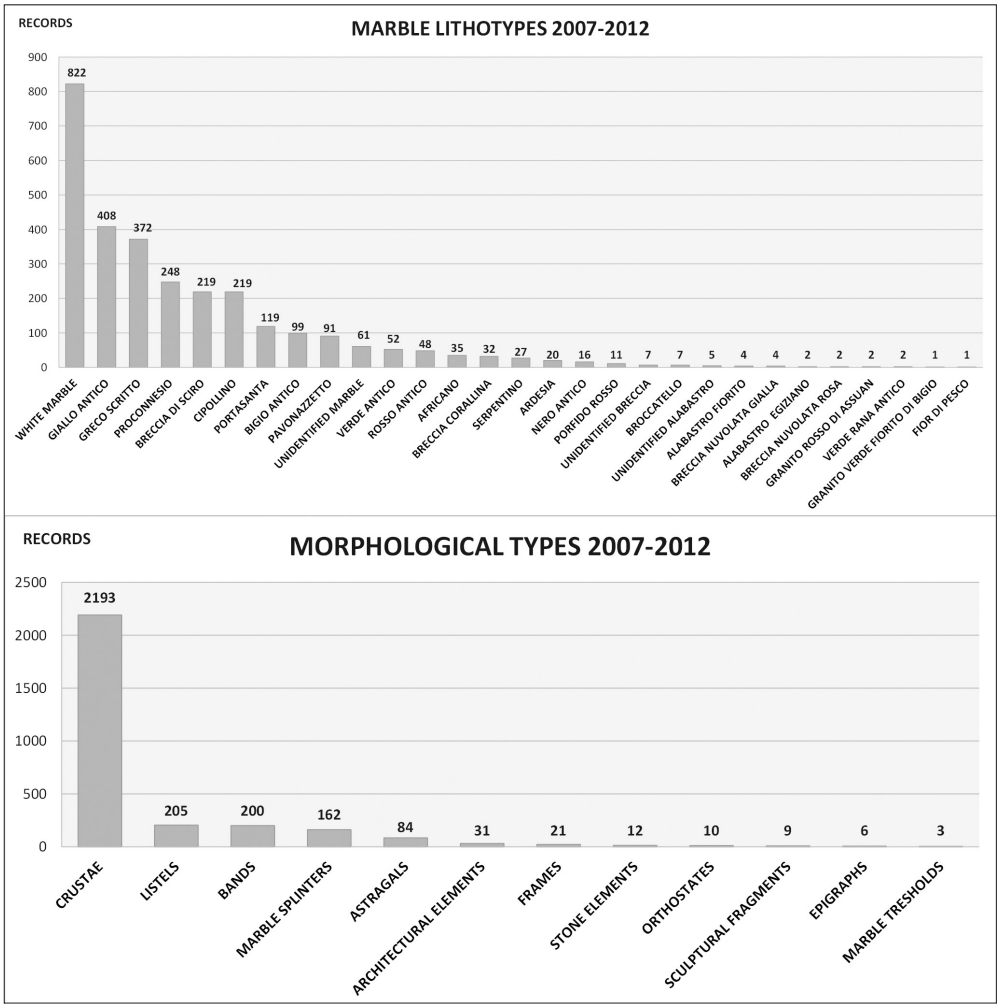

Fig. 2.
Marble lithotypes and morphological types from OMP 2007–2012 campaigns. Histogram (S. Succi)

is the presence of listels and bands, documented by the same percentage (about 7% of total) with the same number of finds (200 units), while the number of stone elements (52 fragments, 3% of total) appears lower. There are also: orthostates (10 units), marble thresholds (3 units) and cornices (21 units).

– *Crustae*

For the *crustae* we have 26 different types of marble, among which there is a clear predominance of white marble (809 frs., 37%). The prevailing colored marbles are Greco Scritto (313 frs., 14.5%) and Giallo antico (241 frs., 11%), while Breccia di Sciro and Cipollino follow with lower percentages (from 9% to 7%). The other marbles attested in low percentages (around 4%) are Portasanta, Bigio antico, Pavonazzetto, Verde antico, Africano, Breccia corallina, Serpentino, Rosso and Nero antico, Ardesia, Broccatello di Spagna, Breccia nuvolata gialla e rosa, Verde antico and Fior di Pesco. Finally some fine marbles from the quarries in Egypt are documented, such as Granito Rosso of Assuan, Granito verde fiorito di bigio, Porfido rosso, Alabastro fiorito, Alabastro egizio. Most of the *crustae* (79%) range in thickness from 1 to 3 cm, followed by *crustae* with a thickness from 0.6 to 1 cm and 3 to 5 cm. Very important is the presence of 14 *crustae*, mainly in Giallo antico, Pavonazzetto, Greco scritto and white marbles, with a thickness range from 0.4 to 0.5 cm. From the morphological point of view, *crustae* are divided into framed, geometric and shaped. The framed *crustae* are 152 (7% of the total), mainly in white marble and Greco scritto, but also in colored marbles including Granito rosso di Assuan.

The geometric *crustae* are 421 (20%) and the prevailing lithotypes are white marbles and Giallo antico, followed by Breccia di Sciro, Pavonazzetto and Greco scritto. The prevailing shapes are polygonal, triangular and trapezoidal, but also square, pentagonal, rectangular, lozenge and parallelepipedal are documented. Finally 25 specimens of shaped *crustae* (1% of the total), primarily in Giallo Antico, are documented.

– *Bands*

Bands represent almost 7% of the documented marble fragments (200 frs.); the prevalent marble is Giallo Antico followed by white marbles, Greco Scritto, and Pavonazzetto, while Portasanta, Rosso Antico, Cipollino, Breccia di Sciro and Bigio antico are less documented.

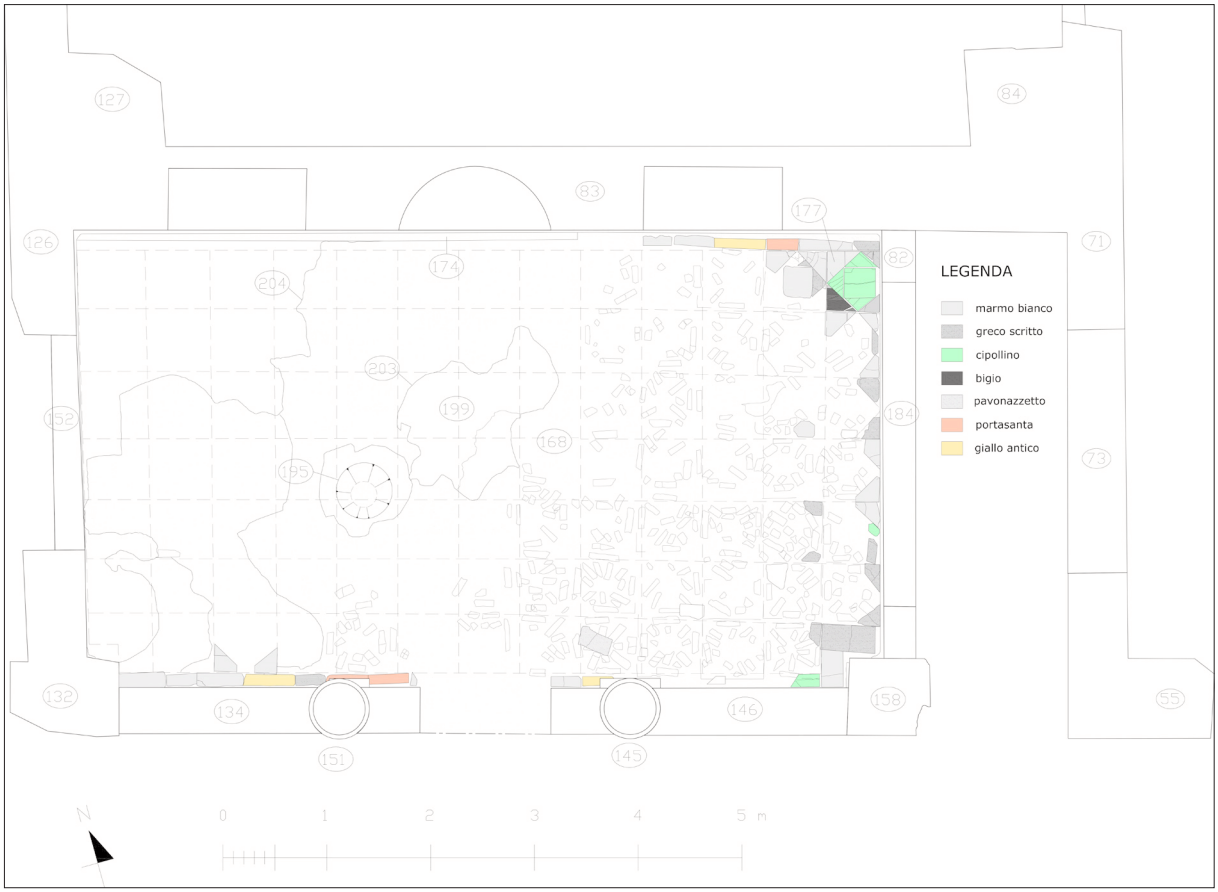

Fig. 3. Silenus Baths, marble pavement, room no. 7. Plan (M. Turci)

Fig. 4. Mithraeum of multicoloured marbles (IV, ix, 5). General plan (A. Melega)

Also documented are Serpentino, Verde antico, Porfido rosso, Breccia corallina and Breccia nuvolata gialla. Most of the bands have a thickness of between 1 and 3 cm. We must report the significant presence of 8 fragments of framed bands in white marbles, Africano, Giallo antico, Cipollino, Pavonazzetto and Greco scritto.

– *Listels*

Listels represent 7% of the marble fragments (20 frs.). The most frequent marble documented is Giallo Antico (71 fragments), followed by white marble and Cipollino. There is a significant presence of Rosso Antico, Nero Antico, Portasanta, Greco scritto and Serpentino; also documented are Pavonazzetto, Breccia di Sciro, Porfido rosso, Africano, Breccia corallina, Bigio antico, Broccatello di Spagna, Granito rosso di Assuan and Granito verde fiorito di bigio. Most of the listels has a thickness between 1 and 3 cm.

– *Astragals*

Astragals are represented by 84 fragments (3% of the total) and the prevailing marble are white marbles followed by Greco Scritto, Bigio antico and Cipollino. There is a small presence of Porfido Rosso and Rosso antico.

In opposite to the general trend the fragments of astragals in Giallo antico are very few (around 2%); Pavonazzetto and Africano are documented with the same percentage. Only a fragment documents the presence of Nero antico, Portasanta and Breccia di Sciro. Almost all the astragals have a thickness ranging from 1 to 3 cm.

– *Framings*

We can note the significant presence of 21 fragments of framings (0.7%), mainly in white marble (1 item in Proconnesian); 6 framings are in Giallo antico, 3 in Greco scritto and 3 in Rosso Antico.

M.D. – S.S.

3. The Silenus Baths: a late antique marble pavement

During the second half of the fourth century AD, the Silenus Baths were affected by restoration works. The most emblematic case is represented by the change of use of the room that housed the northern *natatio* of the *frigidarium*: it was filled and transformed into a closed room with a new marble pavement of high quality (Fig. 3)[6].

The floor tiles are preserved *in situ* only in very small part, and only one unit is preserved in full, in the northeast corner; the central square and some portions of the triangles of a second unit are preserved.

The pavement is organized according to the decorative pattern Q3 of the Guidobaldi classification[7], maybe conceived in the B2 version, with free arrangement of colors, with a side of 0,60 m. (Fig. 3) In the central square of the fully preserved unit it is possible to note the use of Cipollino marble, in some other that of Greco scritto, white marble and Bigio antico. In the unit immediately to the north, only partly preserved, white marble and Greco scritto can be observed. In the unit placed immediately to the east, white marble and Bigio antico are employed. Along the north side of the room a portion of a band is preserved, consisting of reused tiles in white marble, Greco scritto and Portasanta. A fragment of a band in Giallo antico is preserved along the southern side.

In the other floor tiles preserved *in situ* the same marbles occur; this would seem to indicate that for the units a substantial two-color pattern was chosen, obtained with a mixture of white marble, Bigio, Greco scritto and Cipollino. The triangles along the eastern wall are cut off, because they are adapted to the size of the room. This detail suggests that the *marmorarii* proceeded from west to east for the installation of the marble slabs.

In some cases some triangles are made by the juxtaposition of two or more elements of different shape. In the case of a triangle, monochromy is not respected, and Cipollino and a white marble have been put together.

M.D. – M.T.

4.1. The Mithraeum of the colored marbles: description and interpretation

The investigations carried out in the last years by the Ostia Marina Project in the neighborhood outside Porta Marina begin to clarify not only the development of the coastal landscape, but also the dynamic forms of urbanization that unfolded from the 1st century B.C. until the 4th century AD. Around the second half of the fourth century AD, the district became one of those sordid places ("sordentes loci" recorded by an epigraphic source) where prestigious buildings – such as the Terme della Marciana or the *Edificio con opus sectile* – stood side by side with obscure workshops and remote meeting places. In this context a *caupona*, newly designed and built in the middle of the 3rd century, was renovated and adapted to the needs of a Mithraic community. The building, called 'Mithraeum of the colored marbles', was endowed with a very special worship hall (*spelaeum*) with a marble pavement and walls plastered and painted in imitation of fine marble. Such a work can obviously be explained, and also justified, only in the frame of a period (late fourth century – early fifth century AD) in which the stone market was dominated by reused materials. The interpretation of the building, as well as the refinement of its chronology, are particularly complex not only because of the uniqueness of the monument,

6 DAVID *et al.* 2014, 337–343.

7 GUIDOBALDI 1981–1983.

but also by the specific complexity of the stratigraphic sequence, largely conditioned by the robberies that took place after the year 1000.

M.D.

4.2. Quantitative and qualitative analysis of the marble pavement

The *spelaeum*, a long and narrow hall (7.20 m long x 3.00 m wide), has an apse that ends with a rectangular niche; it was equipped with a ritual well with a marble well-curb, a peculiar earth planting-bed (maybe for a sacred plant), and a low bench raised from the floor about 20 cm to support a long *kline* for the banquets (or the ritual meals). On the back wall of the niche is a molded sheld in white marble, probably used as a support of a carved slab (unfortunately lost) reproducing the traditional Mithraic icon with the slaying of the bull by the god (Fig. 5).

The long and narrow hall, as required by the Mithraic architectural tradition, presents peculiar characteristics that clearly differentiate it from other *mithraea* identified at Ostia Antica: first, the small size, and then the presence of a single *podium*. It should be added that among the *mithraea* found in Ostia, this is for now the only suburban one.

The hall is characterized by a very special and anomalous colored marble pavement. Each floor tile is carefully made with the juxtaposition of irregular and reused marble elements (Fig. 6). Although all the pieces are clearly reused, only a small percentage presents macroscopic and clear traces of the previous function. In two points of the surface there are carvings for housing small altarpieces: one in front of the niche, the other at the top of the bench.

The center of the hall is marked by the presence of a kind of *solea* leading up to the niche.

The statistical studies of the marbles that compose the Mithraeum's pavement are a significant instrument for the interpretation of this important structure, and provide us interesting insights for comparison with the marble documentation coming from the whole area. The floor of the *spelaeum* also includes paving of the niche W and the threshold of the entrance SE and the surface of the *podium*. Since the statistical studies found no significant differences between the two surfaces, the data presented here relate to the pavement as a whole.

The surface of the pavement presents 16 types of colored marbles and a small variety of white marble, such as the Proconnesian, for which further archaeometric investigations are required (Fig. 7). The total number of the marble fragment amounts to about 1200 units (1185 fragments). The presence of colored marbles is predominant with 82% of the finds (966 fragments); the remaining 18% consists of white marbles (219 items, including the Proconnesian), some coming from Greek quarries. Among the colored marbles Africano marble (*Luculleus*) strongly prevails. almost 40% of the total (462 frs.). The massive presence of this marble in the Mithraeum's pavement is strongly in contrast with its documentation in the remaining excavation areas of insula IX, where it is extremely low (around 1%). Africano marble is also documented in its green variety (118 frs., a quarter of all the Africano finds) and in the black one (only 2 frs.) (Fig. 9.3); the distribution of this marble appears equally spread across the pavement area, although the green variety is mainly attested in the *podium*. Besides the Africano it is possible to point out the strong presence of Giallo antico, amounting to about 350 frs. (almost 30% of the finds); the presence of this marble is in accordance with its massive documentation in the rest of the excavation but in the Mithraeum's pavement there also appear some examples of its pinkish variety (18 frs.) (Fig. 9.4). The two prevailing marbles just mentioned (Africano and Giallo antico) cover, by themselves, almost 70% of all the marble finds and their relative concentration in Mithraeum appears largest in the entire excavation area; about Giallo antico, just under half of all the finds discovered in the entire excavation area have been found in Mithraeum, while 9 fragments out of 10 of Africano marble are found in the Mithraeum's pavement. The remaining 14 colored lithotypes are scarcely documented: Cipollino (80 frs.), Greco scritto (29 frs.), Portasanta (17 frs.) and Pavonazzetto (15 frs.) reach 12% of the total. Also attested, finally, in very few examples, are Bigio antico, Breccia di Sciro, Breccia nuvolata gialla, Bardiglio, Breccia corallina, Palombino, Serpentino, Nero and Rosso Antico (their statistical total weight amounts to little more than 1%). Overall the variety of lithotypes of the Mithraeum's pavement appears to be smaller than the total marble documentation of the entire excavation area, while the massive presence of Africano marble, the reduced presence of Greco scritto, the total absence of marble coming from Egypt and the near absence of Breccia (especially of Breccia di Sciro) are in opposition to the general trend. One should also note, for completeness of information, the presence in the pavement of three brick fragments and four fragments of tuff. The greater *crustae* measure about 29 x 26 cm; the smaller about 3 x 3 cm (medium size approximately 15 x 10 cm).

The most important difference between the pavement of the *spelaeum* (which documents 821 marble fragments, 70% of the total) and the surface of the *podium* (which documents 364 fragments, 30% of the total) is the smaller size and the more irregular distribution of the marble finds of the *podium* which also include a smaller

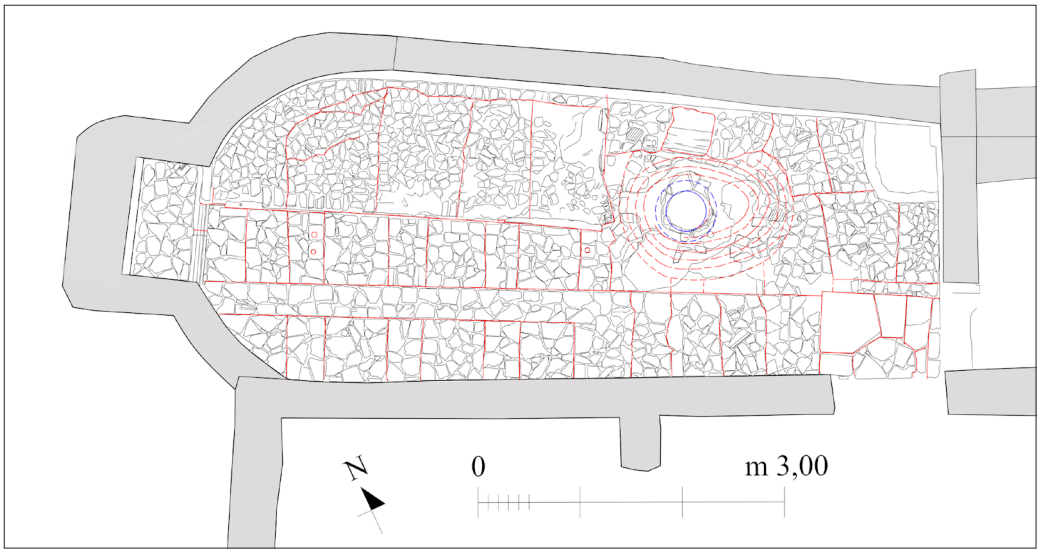

Fig. 5.
Mithraic *spelaeum*, marble pavement (IV, ix, 5). Plan (elab. by M. Turci)

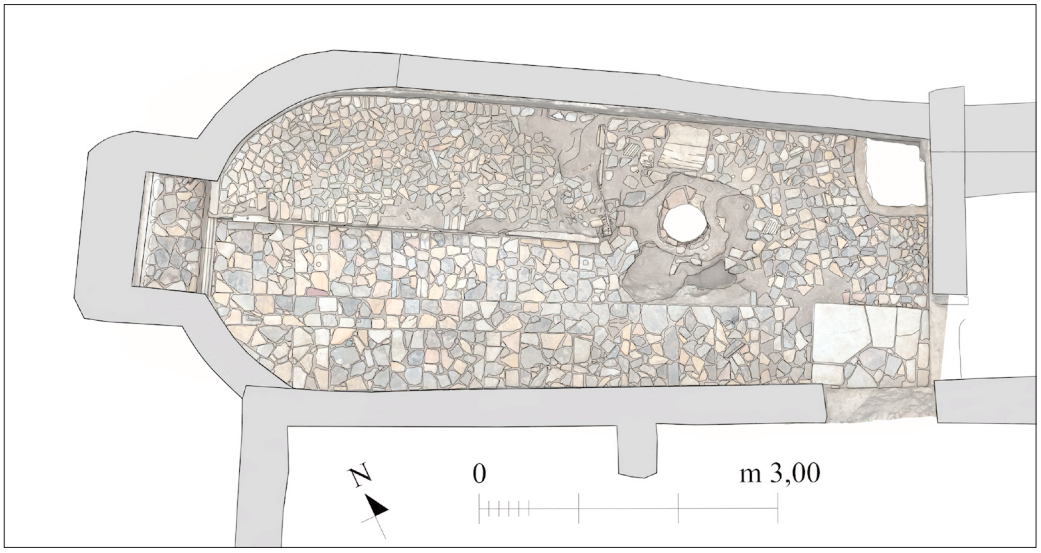

Fig. 6.
Mithraic *spelaeum*, marble pavement (IV, ix, 5). Photomosaic (D. Abate, elab. by M. Turci)

variety of lithotypes and morphological types. More precisely, the prevailing lithotypes in the main pavement and in the *podium* are the same and in the same proportions (Africano, Giallo antico, white marbles, Cipollino, Greco Scritto, Portasanta e Pavonazzetto); in the *podium* there is a larger presence of the green variety of Africano (almost the same percentage of the main variety of Africano) and the absence of some lithotypes such as the black variety of Africano, Bigio antico, Breccia di Sciro, Breccia nuvolata gialla, Nero and Rosso antico, Palombino, Serpentino. By contrast in the *podium* Breccia corallina is documented while it is completely absent in the rest of the pavement. Even the prevailing morphological types in the main pavement and in the *podium* are the same and with the same statistical weight, with the dominance of *crustae* followed by bands; in the *podium* there is a total absence of listels and fragments of pilasters and there is a larger presence of geometric *crustae* and a nearly total absence of shaped *crustae*.

A further analysis may be done for the niche (located in in the west side) and for the marble threshold placed at the entrance of the southeast side of the *Mithraeum*, both included in the main pavement. The pavement by the niche is made by 43 *crustae*, mainly in Africano marble, Giallo antico and white marbles.

The marble threshold is made by 25 fragments, mainly in white marble (14 frs., 60%), while the remaining fragments are in Africano, Greco scritto, Cipollino and Bardiglio. The fragments of white marble constitute the outer and more extended part of the threshold. The fragments of the step are all *crustae*, except for 3 framed *crustae* and a band with a height of 11 cm. It has to be noted the absence of stone materials of Egyptian origin.

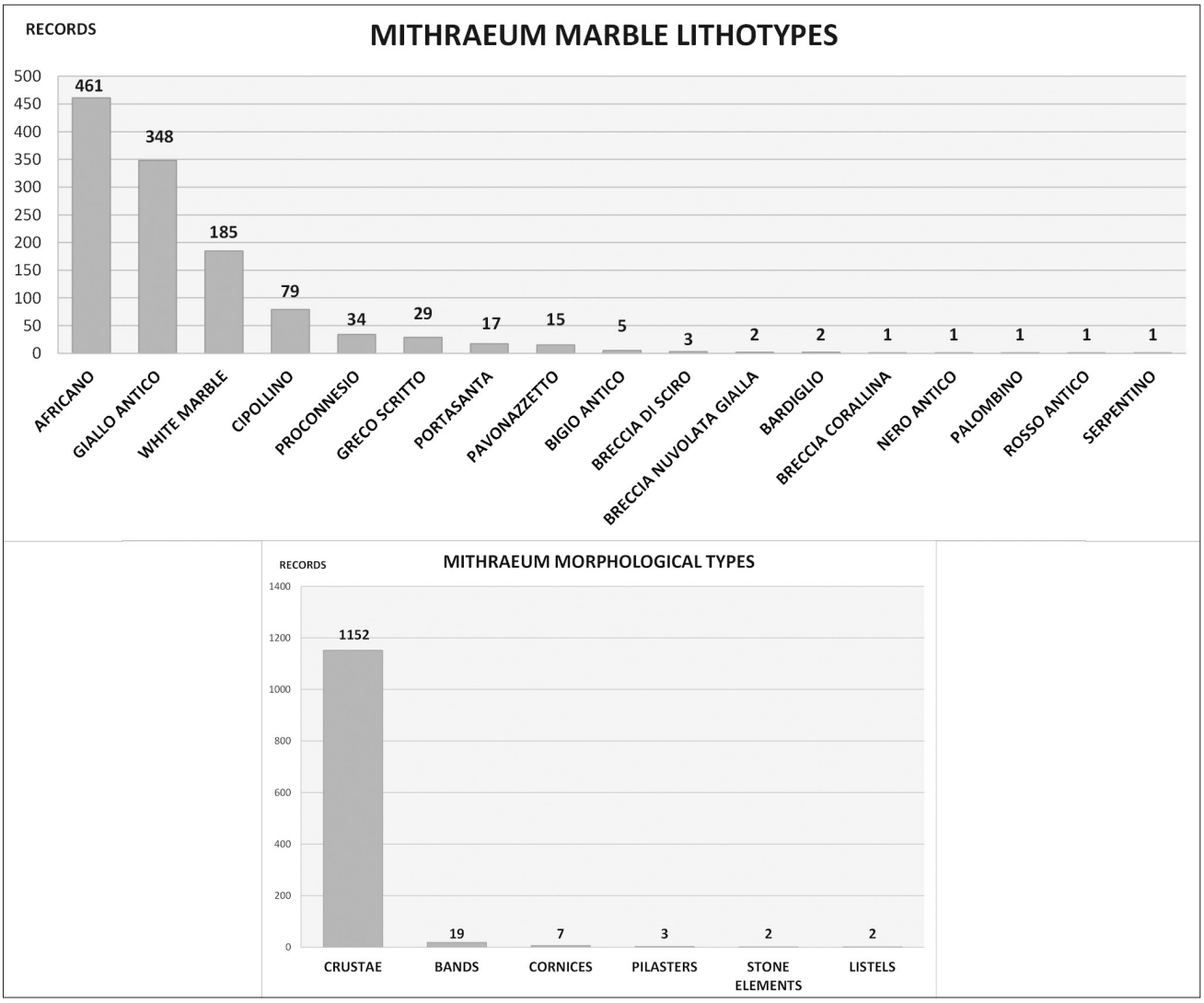

Fig. 7. Marble lithotypes and morphological types from the Mithraeum (IV, ix, 5), histogram (S. Succi)

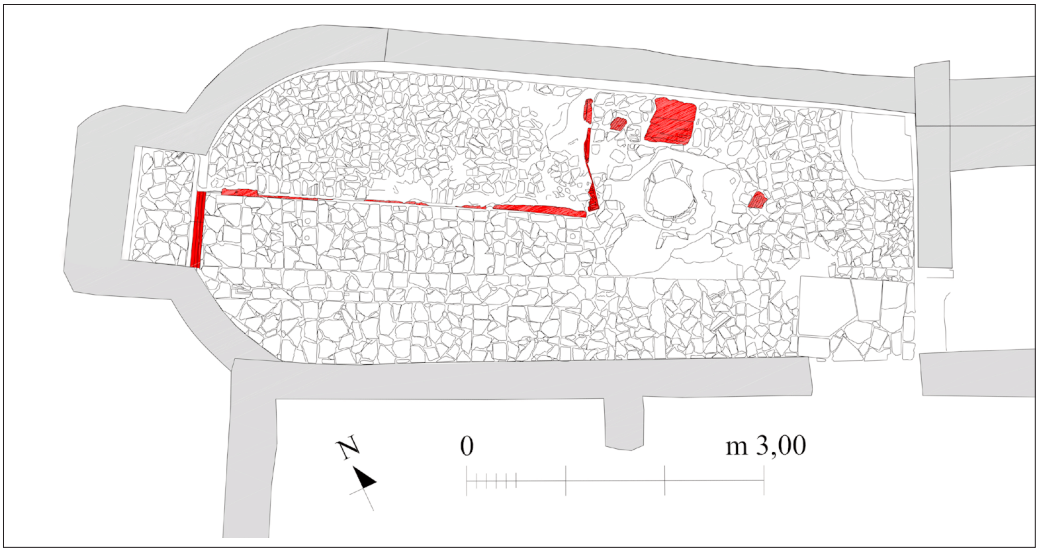

Fig. 8. Architectural elements from the Mithraic *spelaeum* (IV, ix, 5). Plan (elab. by M. Turci)

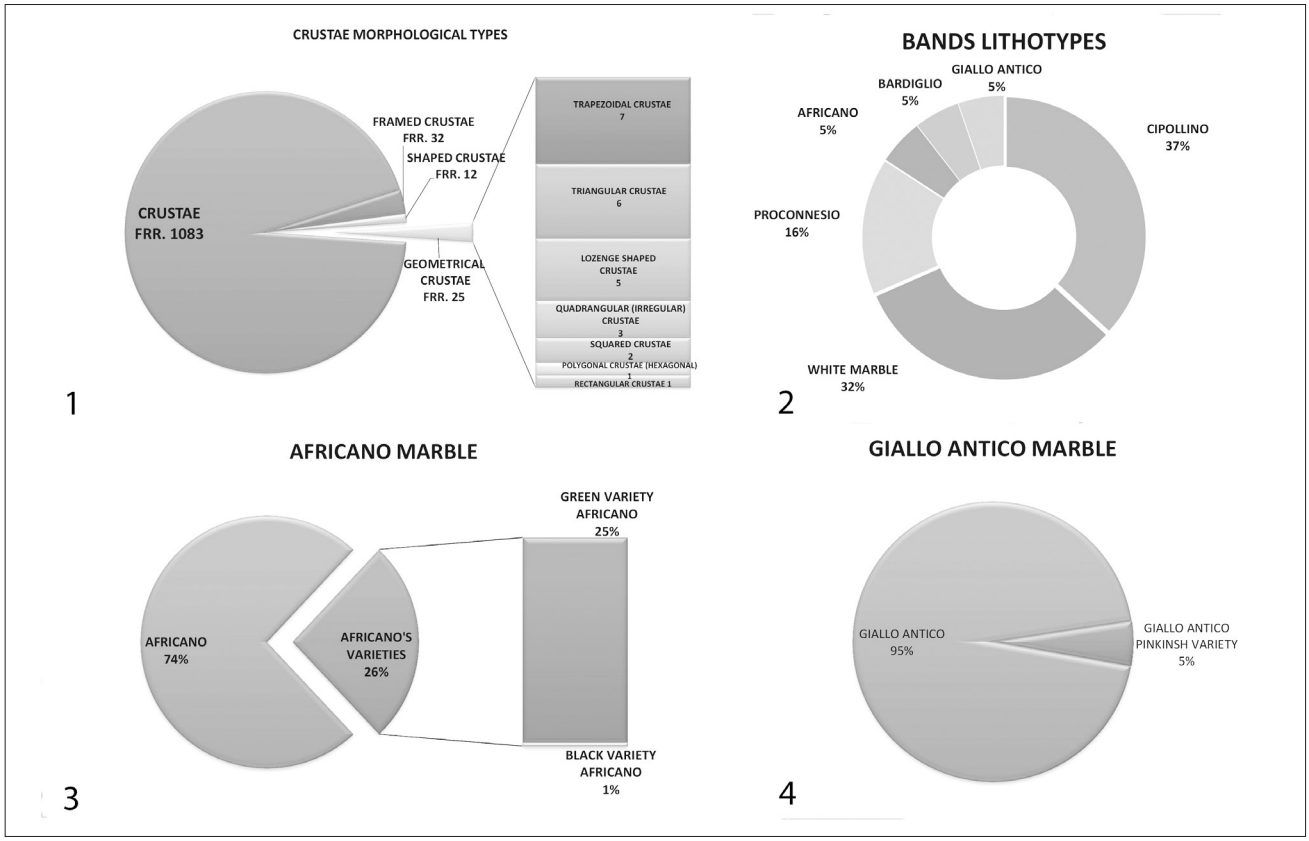

Fig. 9. Statistics from the Mithraic *spelaeum* (IV, ix, 5). Pie charts (S. Succi)

4.3. Morphological types

4.3.1. Coating elements (Fig. 7)

There are six morphological types that have been identified belonging to the whole Mithraeum pavement, including the *podium*: *crustae*, bands, listels, cornices, pilasters and stone elements. Among the morphological types of cladding elements, the presence of *crustae* is clearly dominant with 97% of finds (1,152 frs.); quite low is the presence of bands (19 frs. and less than 2% of the total) while only two listels are documented, both in Giallo antico. Very significant is the presence of 3 fragments of pilasters and 7 architectural cornices, all in white marble.

– *Crustae* (Fig. 9.1)

There are 15 different colored marble lithotypes, among which there is a strong prevalence of Africano (40% of the total, 345 frs.), also documented in its green and black varieties and Giallo antico (30%, 345 frs.), also documented in its pink variety.

Cipollino, Greco scritto, Portasanta and Pavonazzetto are documented with percentages significantly lower (between 6 and 1%); the other marbles attested in low percentages are Bigio antico, Breccia di Sciro, Breccia nuvolata gialla, Bardiglio, Breccia corallina, Palombino, Rosso antico e Nero antico, Serpentino. Regarding white marbles we have found 198 frs. (17%) including the Proconnesian.

From a morphological point of view the *crustae* were divided into framed, geometric and shaped. Framed *crustae* are almost 3% (32 frs.), half of them in Africano marble and, to a lesser proportion, white marbles and other colored marbles, among which Giallo antico, Greco scritto, Pavonazzetto, Cipollino, Portasanta and Breccia nuvolata gialla prevail.

Geometric *crustae* constitute about 2% (25 frs.) and the prevailing lithotypes are white marbles and Giallo antico, with a lower presence of Africano and a single find of Greco scritto and Palombino. The prevailing shapes are quadrangular (trapezoidal, lozenge, square and rectangular) and triangular; very significant is the presence of a slightly irregular hexagonal *crusta* in Giallo antico. There were 3 geometric square *crustae* with a circular groove of 2.5 / 3 cm of diameter on the exposed face, two of them in white marble one in Giallo antico.

Finally, there are only 12 shaped *crustae* (1% of the total), almost exclusively in Giallo antico, except for 4 finds in white marble and Africano.

– *Bands and listels*

The bands are documented by 19 frs. (1,60% of total); the prevailing lithotypes are white marbles and Cipollino, followed by Africano and Giallo antico (Fig. 9.2); the width of the bands varies, on average, from 8 to 11 cm. The listes are very few with only two fragments in Giallo antico, 2,5 cm thick.

Fig. 10.
Mithraeum of the colored marbles (IV, ix, 5). Marble imitation in mural painting, room no. 3 (photogrammetry by D. Abate)

Fig. 11. Mithraeum of colored marbles (IV, ix, 5). Mural painting with marble imitation, room no. 1 (photograph by M. Turci)

4.3.2 Architectural elements (Fig. 8)

Architectural elements are hardly attested at all (less than 1% of the total, amounting to 10 units). They are mainly architectural cornices in white marble (7 frs.), two of them belonging to the niche of the W side of the *Mithraeum* and five (one of which made up of two pieces) belonging to the socle of the raised *podium*. These elements are disposed in such a manner that the decoration is not visible even if in one case; because of the collapse near the ritual well; it is possible to notice a decoration with a *kyma* of smooth and continuous leaves.

In addition to the cornices, also documented are three fragments of pilaster not clearly pertinent to each other; the fragments are all placed in the eastern sector of the Mithraeum's pavement, near the citual well; the two largest have three grooves while the third, the smallest, only two.

S.S. – M.T.

4.3.3. Painted imitations of marbles

The Mithraic sect shows a particular passion for marble, even if reused. This is related to the pavements, but – in another form – even to the walls, which have a painted decoration in *faux marbre*. In room no. 3 (Fig. 10), e.g., the walls are decorated by a rather high base with rectangular panels that imitate Giallo antico, made with a painting in yellow ochre with red veins[8], framed by a narrow band of red that seems to imitate listels in Rosso Antico. The upper register is decorated with large white panels marked by long oblique veins, alluding to Proconnesian marble. The panels are framed by large black bands with green dots that imitate the Serpentino.

In the room no. 1 (Fig. 11), the painting decoration is totally preserved and shows the same composition with a white background continuous base stippled in blue and red, that seems to imitate Pavonazzetto.

8 Another imitation of marble decoration, made with red brushwork on a yellow background, is preserved on the lower part of room no. 5.

On the long sides, above a red band, the middle part of the wall is decorated with seven white panels framed by large blue bands, decorated in the lower part with vegetal motifs.

In the great hall, maybe the initiatory room, the marbling of the wainscot appears to be as a late evolution of some elaborate changes observable in Rome in the Roman Houses under the Basilica of Saints John and Paul on the Celian Hill.

M.D. – M.T.

5. Conclusions

The analytical-statistical survey carried out by the Ostia Marina Project sheds new light on some issues of great interest, in view of the study focused on the Ostian marbles:

1) reconstruction of the original marble equipment, as in the case of the Silenus Baths in the Hadrianic phase of the thermal building;
2) possibilities of statistical and quantitative assessments of the Ostia marbles;
3) techniques of marble working in Late Antiquity;
4) procedures and recovery techniques of marble in the Roman and post-classical age.

Excavations and studies still continue.

As for the marble finds, great attention will in the future be paid to the study of the not yet inventoried materials, to the recognition of rock types and morphological types found during the 2013 and 2014 campaigns, to the completion of the statistical study, focusing and deepening the archaeometric analysis, mostly on the white marble.

M.D.

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