Use and aesthetics of Iasian marble in presbyteries of the 6th century

Abstract: This paper offers a survey of the uses of Iasian marbles and their relationships with other stones. In the 6th century, these marbles were used for wall cladding and flooring, with an aim to alternate with or frame lighter marbles, as was the case in Iasos, in the Agora Basilica. Similar combinations were attested in the cladding of *synthronoi* of the basilicas A and C of Nea Anchialos. In the latter, the sides of the presbytery were framed with red *cipollino* slabs of different lengths and widths. In the *prostoon*, *verde antico* was added to red and white veined marbles.
Other examples seem to demonstrate the use of the red *cipollino* to mark thresholds and passageways, as was the case of the solea of Hagia Sophia and the presbytery of the basilica of St. John in Ephesos. There, the templon stylobate and bases made of Iasian marble supported columns of *verde antico* and gray marbles; some slabs would have been of the openwork type; thus, the variety of marbles, their textures and workmanship must have contributed to the deep impact of the arrangement.

Keywords: Iasian marble, use of marble, flooring, marble combinations, presbyteries

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INTRODUCTION

Marmor Iassense, blood-red in color, originated from the inland areas of Iasos, a Karian city located slightly north of the Halikarnassos Peninsula [*Fig. 1*]. Not far from the city, marble outcrops with traces of quarrying are still recognizable in gorges and on plateaus (Andreoli et al. 2002: 13–14). Around them, a number of recognized features, such as a sledge road and several buildings, testify to different stages of marble processing (Andreoli et al. 2002: 14; Berti and Peirano 2016: 180). Three main quarry areas are known to have provided the following marble types: monochrome, *brecciato* —both sometimes used in sculpture—, and *cipollino* (Attanasio et al. 2021: 25) [*Fig. 2*].

Initially used to manufacture small artifacts and architectural detail in the city and its *chora* (Berti and Peirano 2014: 45–55; Peirano 2018: 99–102), Iasian marble was also exported in the form of columns from the 2nd century AD onward (Baldoni 2005: 107), and as floor tiles starting from the 4th century (Lazzarini 2009: 24). It was in the 6th century, however, that it reached the peak of its popularity.

The last three decades have brought reports on a number of import destinations and places of primary use of Iasian marble, as well as information on its secondary use as reworked material (Lazzarini 2004: 110). In recent years, efforts have also been made to investigate Iasian

Fig. 1. Map of Karia showing the location of Iasos on the coast (Basemap: Mapbox, processing: M. Momot)

marble use in context, as well as its relationship with other materials, mainly in the 6th century (Berti and Peirano 2023: 7–9).

The aim of this paper is to collect evidence on the placement of Iasian marble in 6th-century church interiors, mainly in presbyteries, and to determine to what extent the aesthetic qualities of this stone influenced its use and combinations with other marbles.

EARLY USES OF IASIAN MARBLE

In the 6th century, the first evidence of use of Iasian marble comes from the churches of SS. Leontius, Sergius and Bacchus in Bosra, dated to before 512–513 (Masturzo 1995: 378), and of Hagios Polyeuktos in Constantinople, built between 524 and 527. In both structures, the monochrome as well as the veined types were used. In the first example, the small size of the fragments seems to indicate their use on walls as frames; the marble seems to have been used with the same intent in Hagios Polyeuktos, where Harrison recorded 150 "bars". They were in all likelihood fillets, as most measured between 5 and 5.5 cm in width and 13 of them had mitered ends (Harrison 1986: 179). In this church, Iasian marble was also used in *sectilia*, where six tiles (square and triangular in equal numbers) have been found (Harrison 1986: 179). They were, however, scattered around the building's foundations, making their original position hard to determine. The interior was furnished predominantly with Prokonnesian marble, which comprised three-quarters of the decorative stone material used.[1] The Iasian marble amounted to 6.5% of the share comprising all other, non-Prokonnesian marble types and slightly more than 1.5% of the total volume of marble used in the structure. It may have been used to create thin frames around panels made from other marbles. In such compositions, Iasian marble may have been combined with stone from Dokimeion (amounting to 24% of the non-Prokonnesian marbles), *giallo antico* (17%), green porphyry (15%), Thessalian marble (14.5%), and red porphyry (4.8%). In this church, Iasian marble also appears in the

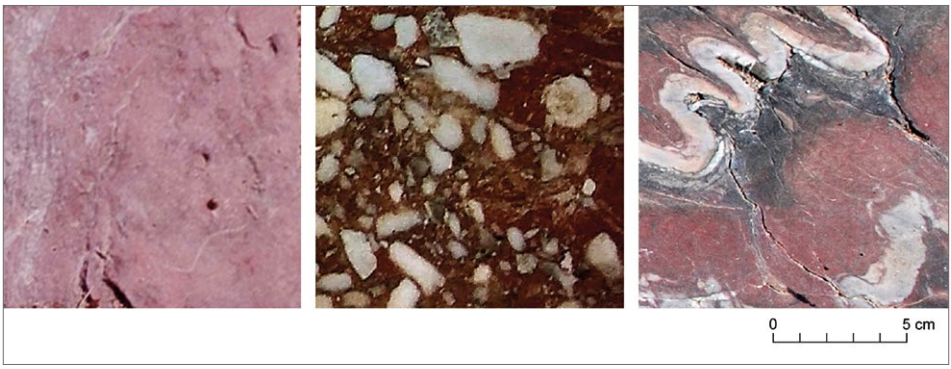

Fig. 2. Three types of Iasian marble (Photos D. Peirano)

1 This and the following percentages are based on Harrison 1986: 179–180.

flooring of the crypt: Harrison (1986: 168) recorded that it was paved "with a patterned marble floor of Proconnesian and Iasos slabs".

MARBLE PRODUCTION AND USE IN IASOS

In the times of Justinian, red marble started to be used for cladding some of the most prestigious religious buildings in the Mediterranean. 108 blocks waiting to be transformed into slabs have been found during excavations inside a monumental tomb referred to as Balık Pazarı in Iasos. The tomb, built in the 2nd century next to the city's aqueduct (Bruno 2012; Berti, Molinari, and Peirano 2022: 247–250), was, in the 6th century, converted into a workshop where marble blocks were sawn into slabs with use of a water-powered sawmill [*Fig. 3*].

A closer inspection of a block preserved in front of the marble workshop has indicated that not all blocks were cut using a water-powered saw. The pieces varied considerably in size and only the larger ones preserved saw marks, which averaged 0.9–1 cm in depth and were placed at a distance of 2.5 cm from one another. The reduced thickness can be explained by the need to follow the veins, which was a convenient way of obtaining pairs of almost identical slabs for use in book-

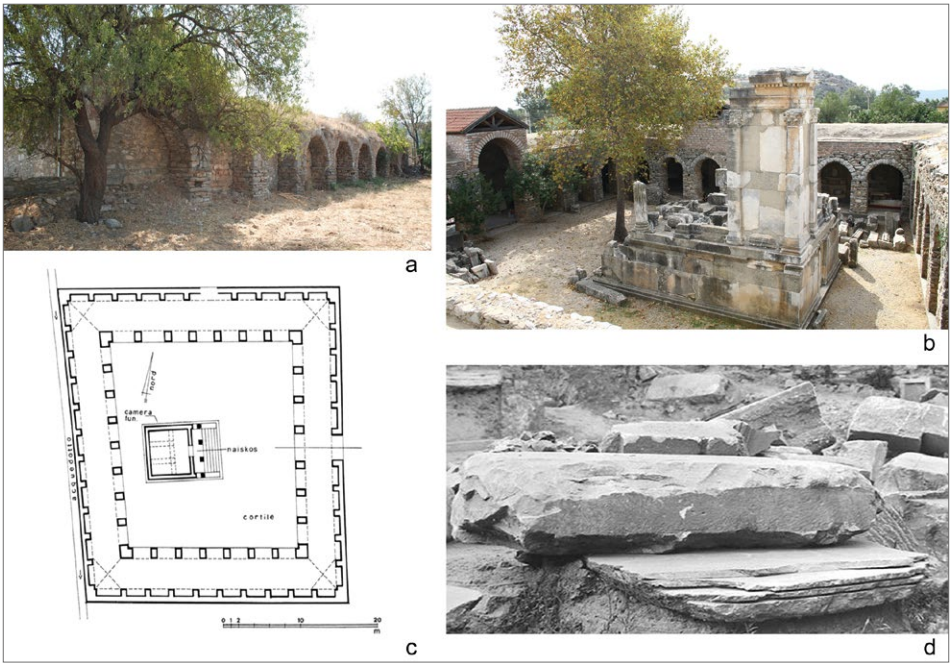

Fig. 3. Water-powered sawmill in the Balık Pazarı tomb: a – arcades of the aqueduct along the tomb (Photo D. Peirano); b – rooftop view of the tomb (photo M. Molinari); c – plan of the complex (Drawing F. Tomasello); d – several blocks found during excavations, the one in the foreground bearing saw marks (Italian School of Archaeology at Athens)

matched arrangements or groups of four for open-vein compositions. On the other hand, the pavement slabs were considerably thicker than those used as wall revetments and lacked saw marks: some of them had probably been broken away using wedges,[2] shaped with the usual carvers' tools, and finally polished; their undersides were merely roughened.

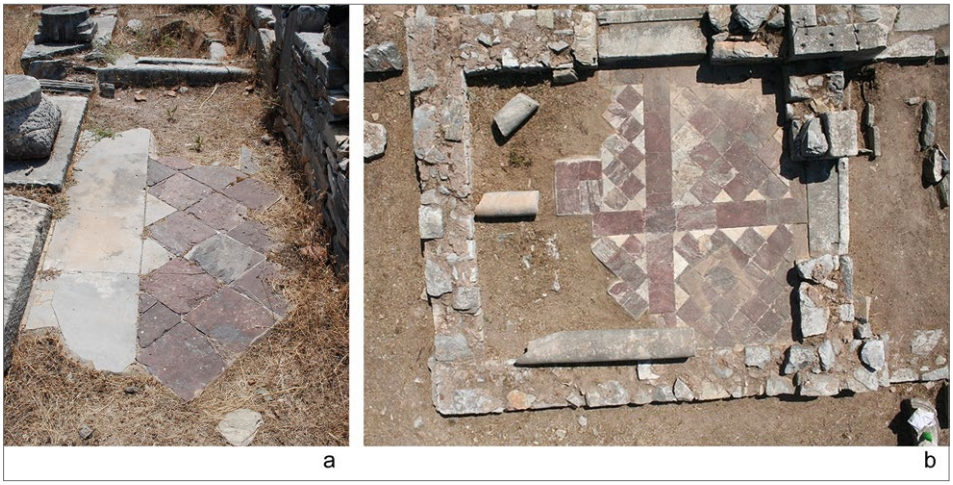

Fig. 4. Marble floors of the Agora Basilica in Iasos: a – monochrome marble tiles in the northern aisle (Photo D. Peirano); b – flooring of the north room accessed from the narthex (Photo M. Molinari)

Fig. 5. *Cipollino* slab marking the entrance from the narthex to the nave of the Agora Basilica in Iasos (Photo D. Peirano)

2 A slab 4.2 cm thick and only roughened on the underside is preserved *ex situ* in the Acropolis Basilica. See also the item referred to in note 3.

The Balık Pazarı marble workshop may have contributed to the increased availability of Iasian *cipollino* in the 6th century. However, it is conceivable that greater profits were obtained from the export of this stone than from its local use, as in Iasos itself there is scant evidence for use of the local marble. It was present only in the Agora Basilica, dated to the Justinianic era (Serin 2004: 101), where a small column made of Iasian *brecciato* was integrated into a wall of a middle Byzantine church erected within the nave. Some red *cipollino* was also present in the form of slabs of wall cladding 2.2 cm thick. In addition, monochrome tiles alternated with white marble were present in the nave and in the north room entered from the narthex [*Fig. 4*]. The use of red marble was probably a sign of importance of this annex, which linked the narthex to an open area to the north of the church. A large slab of red *cipollino* also marked the entrance leading from the narthex to the nave[3] [*Fig. 5*]. The narthex was, in contrast, mainly paved with reused marble slabs, and the space opposite to the north room had no flooring at all.

IASIAN MARBLE IN BASILICA FLOORS IN CONSTANTINOPLE AND BEYOND

In the 6th century, red marble seems to have been used to mark entrances and delineate spaces or paths. This was probably the case in the Gortyn cathedral, where Iasian marble was used to mark a passageway orthogonal to a path made of white marble linking the central entrance, ambo and presbytery (Farioli Campanati and Borboudakis 2005: 167). The passageway in Iasian marble seems to be related to a side entrance giving access to the baptistery.[4]

In the Justinianic era, red *cipollino* became widespread in the eastern Mediterranean (Peirano 2018: 102–104). Its diffusion map shows two roughly concentric circles with the Aegean Sea at their center [*Fig. 6*]. On the edge of the larger circle lies Poreč with its Cathedral of Euphrasius. In the apse this church, small tiles of red *cipollino* —square, rectangular and triangular— were used in parallel bands flanking the altar (seven to the south and five to the north) [*Fig. 7*]. Together with other dark stones, namely green and red porphyry, the *cipollino* was used to compose geometric patterns against a background of light-colored Prokonnesian marble (Terry 1986: 155–156). This may be recognized as a somewhat tentative attempt to use stark contrasts between light and dark stones around the altar within the presbytery. It cannot be excluded that these bands constituted place markers indicating the position of clerics during the liturgy. Given that the posi-

3 Preserved in front of the Agora Basilica in Iasos is a block of *cipollino* measuring 57 cm x 114 cm, with a height of 10.9 cm.

4 Confirmation is expected to appear in a forthcoming publication of the Gortyn cathedral excavations.

tion of the clergy within the *synthronon* was fixed (as was the seat), it may have likewise been set for clerics standing in front of the altar, with their places marked by marble strips. The use of marble *fascias* to mark the places of various actors of the liturgy during ceremonies has been an object of discussion in the last decades, especially in the context of Hagia Sophia (Majeska 1978; Barry 2007: 627–629, notes 8–9; Stichel 2010: 29–41).

In recent years, a number of studies have also inquired into the aesthetics of marble in Constantinople and beyond (see, among others: Pentcheva 2011; Kiilerich 2012; Schibille 2014: see mainly 99–106). It was in Justinianic times that Iasian marble began to appear in book-matched cornices and open-vein panels in the innovative ecclesiastical buildings of the Empire, such as Hagia Sophia and San Vitale; in flooring, single and book-matched panels made of red *cipollino* began to appear and, concurrently, strips and tiles of the same material were used to frame other marble panels.

In Hagia Sophia, red *cipollino* was used both on walls and in floor revetments. In addition to the book-matched *fascias* in the galleries and on the ground floor [*Fig. 8:a*], there were *cipollino* tiles in the gallery windows [*Fig. 8:b*] and panels of this stone in the endonarthex [*Fig. 8:c*]. Veined *marmor Iassense* is visible in the platform connecting the *qibla* and the *minbar*. The platform conceals traces of the original presbytery, as demonstrated by its flooring slabs that are —with the exception of the borders— aligned

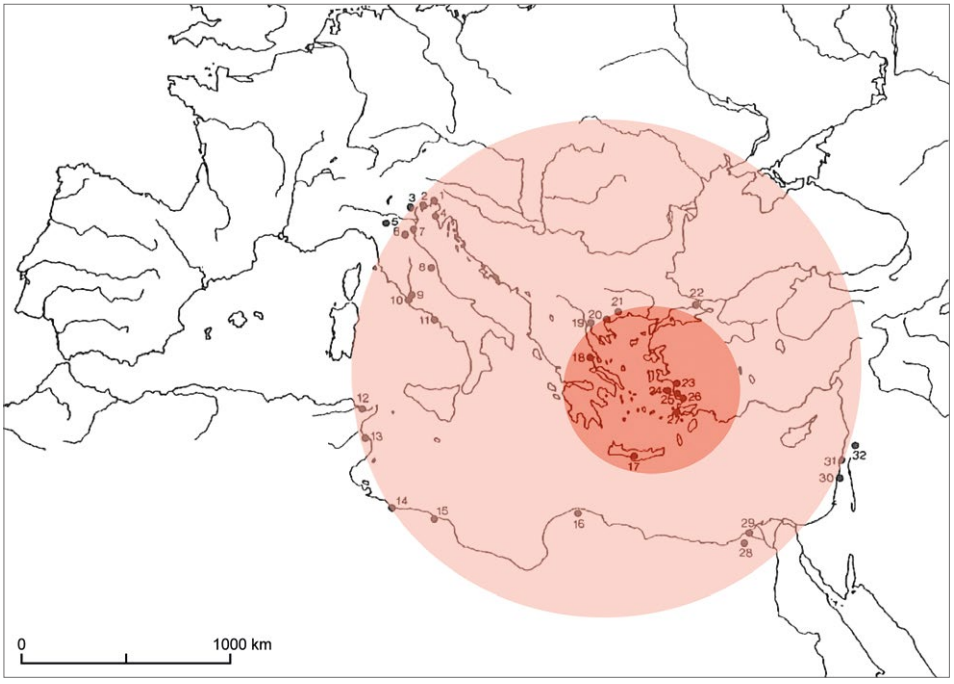

Fig. 6. Map showing the diffusion of red *cipollino* (After Andreoli et al. 2002: 18, Fig. 16, processing D. Peirano)

with those of the nave. Among them, a book-matched slab made of red *cipollino*, aligned with other marble panels, was originally placed in front of the altar, while strips of Iasian red *cipollino* framed on three sides two book-matched slabs of Prokonnesian marble, placed on the axis of the apse. The *cipollino* strips were cut by the oblique Turkish-era platform and thus, in all likelihood, had been part of the original setting of the presbytery, subsequently transformed by the Turks. A reconstruction of the presbytery barriers, solea and ambo proposed by Xydis (1947: 23–24, Fig. 32) some decades ago, as well as a more recent suggestion by Stichel (2010: 30, Fig. 3; 31, Fig. 4), assigned these elements to the solea that linked the presbytery and the ambo [*Fig. 9*].

Paul the Silentiary, in his description of the ambo of Hagia Sophia, provided information about the arrangement of marbles used in its furnishings. The screens enclosing the solea were made of *verde antico*, and the posts, cymatium, and stylobate of *pavonazzetto*.[5] His praise of the furnishings refers both to the entire composition, compared to a marble meadow (Mango 1972: 96, line 256), and to its details. The images invoked are vivid: coils in red and white, with an intermediate color in between, are compared to snakes twining and winding over a pale marble background (Mango 1972: 96, lines 267–269); a few verses further on, Paul admires "the natural markings of the stone that resemble in their changeful lines the moon and the stars" (Mango 1972: 96, lines 273–274).

A similar intent to mark and delineate sacred spaces and paths is recognizable in the stylobate of the templon in the basilica of St. John in Ephesos [*Fig. 10*]. The templon was built over the saint's tomb, bathed in light from many windows around the base of the central dome above it (Thiel 2005: 42–48, 110). Owing to its location at the intersection of the arms of the cruciform church, the templon was indisputably the focal point of the church layout. Here the wavy, horizontal veins of red *cipollino* were used not only to frame the sacred enclosure, but also to bolster its dramatic effect.

Fig. 7. Floor of the presbytery in the Cathedral of Euphrasius in Poreč (After Terry 1986: Fig. 2)

5 A post which Guiglia Guidobaldi has associated with the solea fence was reused in masonry that raised the entire area of the bema, transforming it into the Ottoman mihrab (Sodini, Barsanti, and Guiglia Guidobaldi 1998: 352, Fig. 40; Flaminio 2004: 620–621 contra Mathews 1971: 97).

Although a full reconstruction of the original elevation of the templon is impossible,[6] it is clear that the stylobate and bases, made of red *cipollino* with horizontal veins, were contemporary to the Justinianic church. They were designed to bear full-height columns and they match the lower diameters of the columns of *verde antico* and gray marbles preserved in the modern reconstruction. At least some screens between the columns were likely of the openwork type (Sōtēriou 1922: 174, Fig. 47). Their textures would have contributed to the profoundly dra-

Fig. 8. Iasian marbles in Hagia Sophia: a – wall cladding in the galleries with the upper *fascia* made of red *cipollino*; b – tiles in window archivolts of the galleries; c – book-matched panels in the endonarthex (Photos D. Peirano)

6 In fact, the templon blocks used in the contemporary reconstruction are dated to the 11th century; the column capitals too are evidently a late work.

matic visual impact of the templon arrangement.

In addition, the solea at the basilica of St. John was mainly made from *pavonazzetto* blocks [*Fig. 11*]. Research has shown that in some cases *pavonazzetto* was used as an alternative to red *cipollino*, particularly when the purplish cement in the *pavonazzetto* predominated over the white/cream clasts it enclosed (Berti and Peirano 2023: 9). Owing to the use of this material, the solea visually extended the red *cipollino* stylobate of the presbytery.

On the Greek mainland, some evidence of the presence of Iasian marble was found in Nea Anchialos, around or within the presbyteries of basilicas A (Berti and Peirano 2023: 9) and C.[7] Thanks to a collab-

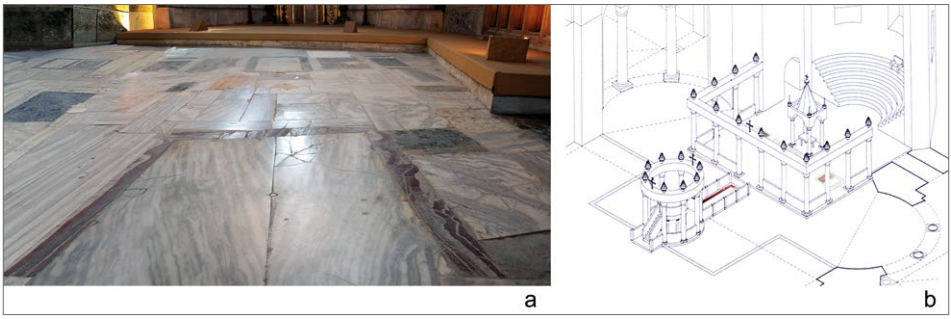

Fig. 9. Hagia Sophia: a – remains of the solea in the later east platform (Photo D. Peirano); b – reconstruction of the original placement of red *cipollino* in the presbytery (After Mainstone 1988: 232–233, Fig. 252 (detail), processing D. Peirano)

Fig. 10. Presbytery of the basilica of St. John in Ephesos with the stylobate and bases made of red *cipollino* (Photo D. Peirano)

7 References to the basilicas are found in Karagiorgou 2001: 187–191 and related bibliography.

oration with the Archaiologiki Etaireia and the Ephorie of Magnesia, it was possible to study the Iasian marble slabs that decorated the presbytery of the basilica C [*Fig. 12*]. The presbytery, dating back to Justinian's time, was coeval with the second enlargement of the church (Lazaridēs 1988: 93). Located at the end of the large, three-aisle basilica, which was in all probability the city's cathedral, the presbytery was *pi*-shaped and preceded by a short solea (*prostoon*). Its short sides were paved with bands of white, veined marble framing medium-large slabs of red *cipollino*. The latter varied in length and width. However, as the preserved *opus sectile* panels featured intricate motifs, and those lost were likely similar in appearance, the differences in dimensions must have been almost imperceptible. The red marble (monochrome, *cipollino*) also appears in these panels as hexagons constituting central elements of radial motifs. The ciborium and high barriers probably also hindered perception of the size differences between the slabs within and outside the presbytery. The *synthronon* seems to have been covered with tiles of red *cipollino* alternated with white veined marble. At least some of the slabs were of Prokonnesian origin (Barbin et al. 2018: 313–314).[8] In the short solea preceding the presbytery, *verde antico* was added to the red and white veined marbles [*Fig. 13*]. The slabs, cut with a saw blade, were remarkably thin (2.7 cm). However, a comparison with the blocks preserved next to the workshop in which they probably had been sawn using a multi-blade water-powered saw (Berti, Molinari, and Peirano 2022: 248–250; see also above) has revealed that floor slabs made there were thicker (4–10 cm) and, rather than with a saw, were worked with a traditional carver's tool, leaving the underside rough. Thus, it seems that the Nea Anchialos slabs were originally conceived as wall revetments not necessarily intended for a paired arrangement. This may also explain their varied di-

Fig. 11. *Pavonazzetto* block in the solea of the basilica of St. John in Ephesos (Photo D. Peirano)

8 Prokonnesian marble was also used to make two fold-type impost capitals with à jour work found in the naos; they stood on Prokonnesian bases (Sōtēriou 1933: 50–51, Fig. 3; Karagiorgou 2013: 159, note 19).

mensions and the fact that the easternmost slabs on both sides each consisted of two pieces of marble. The slabs were ultimately used in flooring, but soon their reduced thickness and resulting fragility fostered the need for repairs [*Fig. 14*].

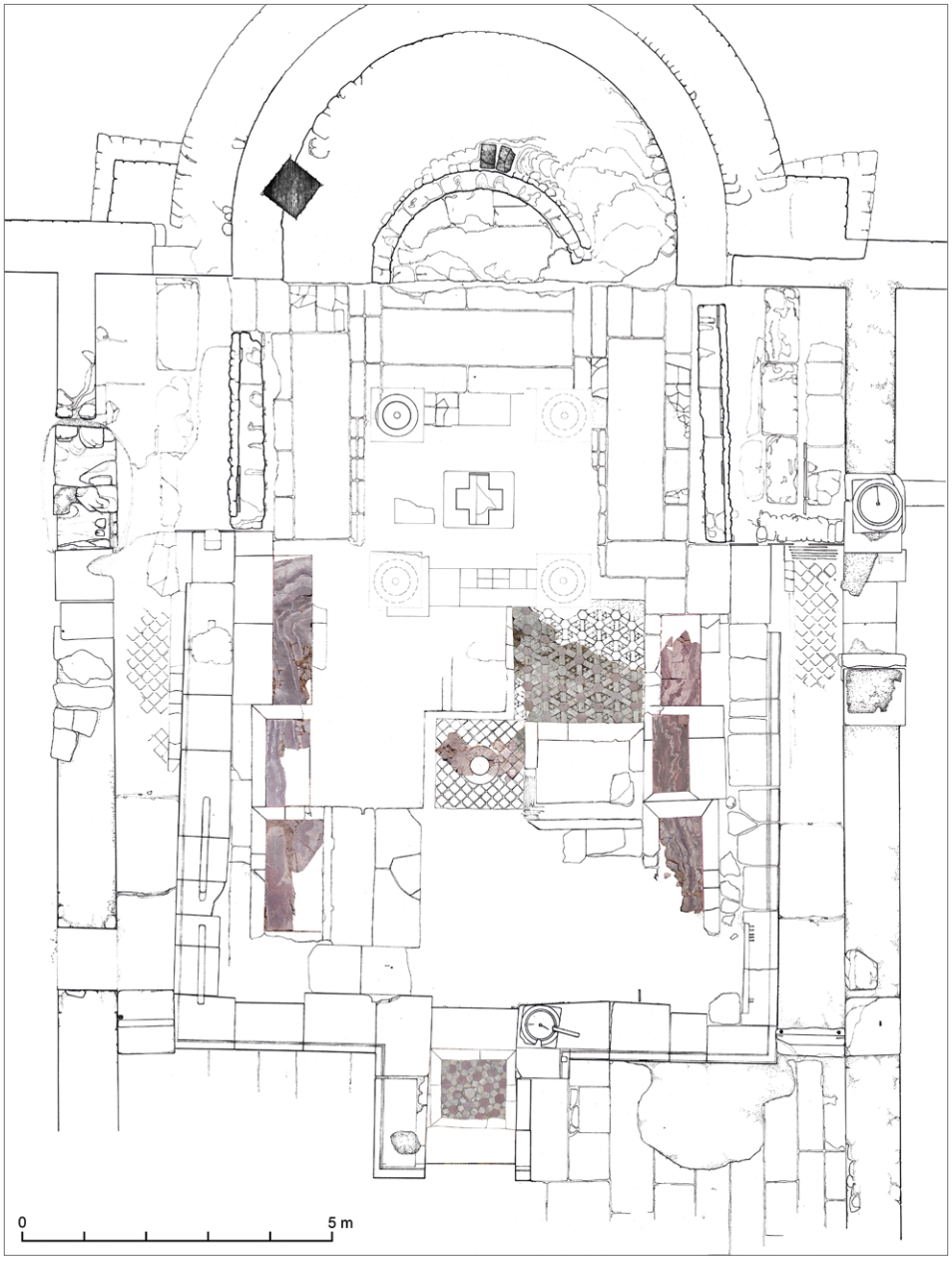

Fig. 12. Plan of the presbytery of basilica C in Nea Anchialos with photos of Iasian marble fragments overlaid (Drawing P. Lazaridis, photos D. Peirano)

CONCLUSIONS

In the Justinianic era, Iasian marble began to be used more frequently; in ecclesiastical complexes commissioned by eminent patrons, this stone was used not only in wall cladding, but also in flooring, sometimes as geometric tiles, in other instances as fillets or large slabs. The latter were used together with marble *listelli* to frame presbyteries and to delineate paths and boundaries. In the solea of Hagia Sophia, fillets made of *cipollino* were used together with barrier slabs to enclose a corridor typically reserved for readers, singers and presbyters. In two examples, basilica C in Nea Anchialos and St. John's basilica in Ephesos, large, red marble elements were used alongside high barriers to delimit areas reserved for presbyters. Generally, it seems that the vivid colors and wavy veins of Iasian marbles rendered these stones suitable for marking and delimiting space. Their use in compositions with other stones, especially colorful or clearly veined ones, as well as with openwork slabs, contributed to the dramatic effect achieved in the decoration of sacred precincts in churches.

Fig. 13. *Prostoon* preceding the presbytery of basilica C in Nea Anchialos (Photo D. Peirano)

Fig. 14. Slab from basilica C in Nea Anchialos presbytery showing ancient repairs (Photo D. Peirano)

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