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UNKNOWN PAINTED QUARRY INSCRIPTIONS FROM BACAKALE AT *DOCIMIUM* (TURKEY)

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Abstract

During a survey in the large quarry area of Bacakale several unknown inscriptions and marks were discovered painted in red colour on some quarry fronts. This epigraphic evidence, which probably can be dated to the middle Imperial period, shows that strict production control was not limited to the quarry items produced, blocks and column shafts, but in fact was extended to the quarry sites, where, on the extraction faces, the amount periodically extracted was recorded.

Keywords

Docimium, Bacakale, inscriptions

Introduction

The productive system in quarries is now well known thanks to the archaeological, epigraphic and historical evidence from many Roman imperial marble quarries. The inscriptions on the quarry items discovered in the extraction sites or in the depots in Rome and Ostia clarify how strict the control of the yearly production was. The *Docimium* quarry district, north from Afyonkarahisar, and close to the village of Iscehisar, was in Roman antiquity one of the most important extraction sites producing the renowned and prestigious Roman imperial *marmor phrygium*, known today also as Pavonazzetto, exploited since the late Augustan age.¹ Due to the intense modern exploitation of the marble outcrop, the ancient quarries of *Docimium* are not very well preserved, but nevertheless, during the last 40 years hundreds of marble blocks and column shafts have been discovered. They were first collected in some depots close to the modern extraction pits and then put on display along the main

central road of the small village of Iscehisar.² Thanks to the studies of several scholars, such as Joseph Röder,³ Marc Waelkens,⁴ Michel Christol and Thomas Drew-Bear,⁵ John Clayton Fant⁶ and Patrizio Pensabene,⁷ all these items, and especially their epigraphic evidence, made it possible to obtain important information about the extraction activity at *Docimium* in Roman times. The quarry marks and inscriptions affirm, in fact, a strict control, indicating not only the intraquarry provenance, the extraction place, distinguished into *loca* and *bracchia*, the *caesurae* and the *officinae* involved in the extraction, the production year and, sometimes, the consular date of a recounting of rough items left in the yards of the quarries or in the depots of the *Urbs*.

In the last twenty years the main quarry site of Bacakale has been cleared of the huge amount of debris that was dumped into the site during the ancient quarry activity, in order to facilitate modern extraction work. In fact, the left side of the Bacakale district was completely destroyed by modern sawing and cutting machines, while the southern quarry front is still well preserved and visible to its original height (Fig. 1).⁸

1 About the opening of the quarries, the use and distribution of Phrygian marble in Roman antiquity see BRUNO, ATTANASIO, PROCHASKA 2012, 406-408; *ead.* 2015, 381-383; FANT 1989, 6-11; PENSABENE 2011, 78; *id.* 2013, 360-361.

2 All the quarry blocks and column shafts were seen on display along the main street of Iscehisar in August 2011, while two years later they were lying all together in an area close to the old bridge of Iscehisar crossing the river Seyitler.

3 RÖDER 1971.

4 WAELEKENS 1982; *id.* 1985; *id.* 1986.

5 CHRISTOL, DREW-BEAR 1986; *ead.* 1987; *ead.* 1991; DREW-BEAR 1994.

6 FANT 1989.

7 PENSABENE 2011.

8 My last visit to *Docimium* was in summer 2013. At that time the director of the Archaeological Museum of Afyonkarahisar told me that the huge southern quarry front is under protection, but what happened up to now to it is not known. Figure 1 in the present paper is a photo taken in 2008 by Turgut Tarhan and published in 2009 in SUMMERER, VON KIENLIN, BRUNO 2009, 112-113.



Fig. 1. Iscehisar, Afyonkarahisar. Overview of the Bacakale district (2008). On the left side the northern limit with modern fronts cut with diamond wire, on the right side the southern roman quarry front (photo: Turgut Tarhan)

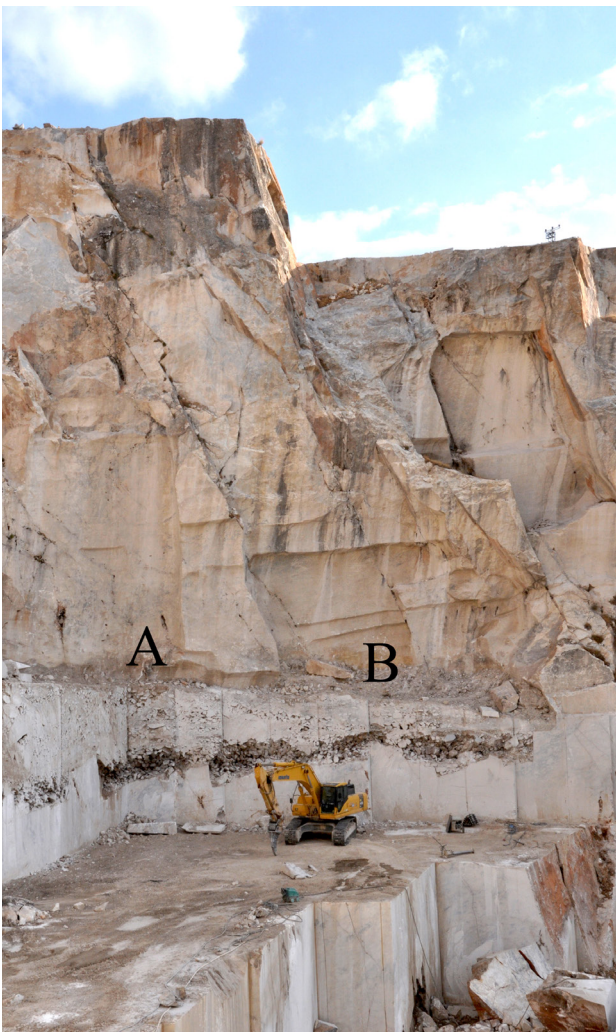


Fig. 2. Detail of the two quarry fronts with painted dates, “A”, and single letters, “B” (July 2013)

The quarry inscriptions

During several surveys in the quarries of Iscehisar since 1995, especially at the site of Bacakale, it was possible to discover many unknown quarry inscriptions painted in red directly on two different quarry fronts (Fig. 2).⁹ The first one (A) is approximately 30 meters tall and shows the typical extraction traces made with the heavy pick. The marble is of high quality and concerns the typical brecciated marble variety of the Roman *marmor phrygium*. In the middle and lower part of the quarry front, several inscriptions are still visible on the rough surfaces of the rock (Fig. 3). They were painted with red colour directly on the surfaces during the extraction activity of Roman times. All the inscriptions, written with capital letters, concern specific dates¹⁰ (Figs. 3 - 4). At the upper left side the 13th of February is mentioned, “(Ad) Id(us) febra(rias)”; less than one meters underneath the 4th of March is painted “(Die) IIII (ad) Non(a)s Mar(tias)”; further to the right, 2.6 meters below, the 29th of April is written “(Die) III (ad) K(alendas) Mai(a)s”; approximately 2 meters lower, the 14th of July is indicated “Pr(idie) Idus Iul(ias)”; on the left side and more than 2 meters underneath, follows the painted indication “(Die) III (ad) K(alendas) Aug(ustas)”, the 30th of July, while the last date, “Pr(idie) Idus Aug(ustas)”, the 12th of August, is again painted more or less at the centre of the quarry faces and only 10 cm lower than the previous one.

9 BRUNO 2017.

10 For the Roman calendar, see INVERNIZZI 1994.

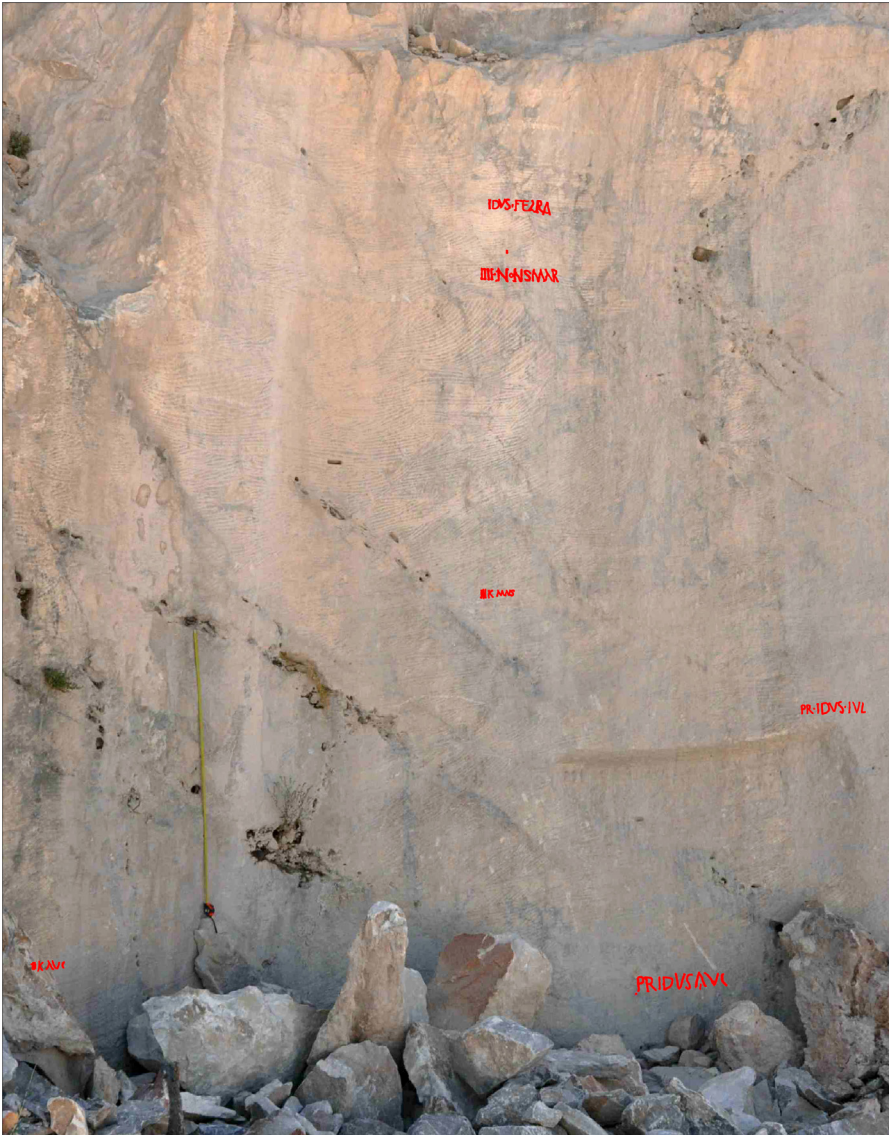


Fig. 3. Detail of wall “A” with painted dates highlighted in red



Fig. 4. Details of the six painted dates on the quarry front “A” (from top to bottom, photographic reproduction, drawing of the evidence and graphical integration). 1. “IDVS·FELRA”, “Idus · Febra(rias) = February 13th”; 2. “III·N·NSMAR”, “(die) IIII (ad) · Non(a)s Mar(tias)” = March 4th”; 3. “III·K·MAIS”, “(die) III (ad) · K(alendas) Mai(a)s” = April 29th”; 4. “PR·IDVS·IVI---”, “Pr(idie) · Idus · Iul(ias) = July 14th”; 5. “IIIKAVC”, “(die) III (ad) K(alendas) Aug(ustas)”, July 30th”; 6. “PRIDVSAVL”, “Pr(idie) Idus Aug(ustas)” = August 12th

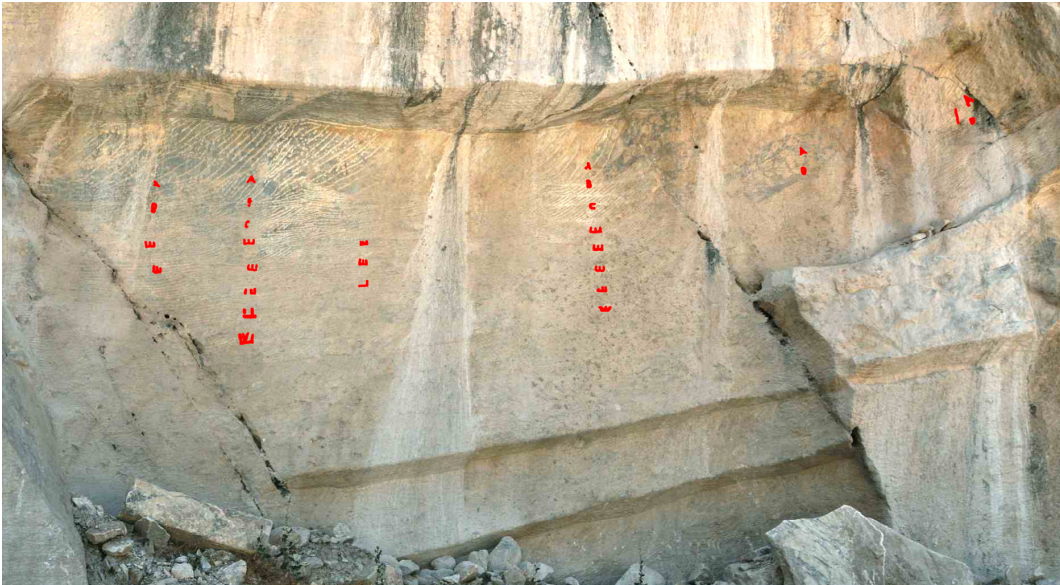


Fig. 5.
Detail of wall
“B” with painted
vertical sequences
highlighted in red

Therefore in summary, the painted inscriptions, from top to bottom, provide us with this chronological sequence: February 13th, March 4th, April 29th, July 14th, July 30th and August 12th. Presuming that the date was applied at the end of extracting activities, at the bottom of the quarry front,¹¹ it results that the time lapse between the successive dates is respectively equal to 19, 56, 76, 16 and 13 days, for an overall total of 180 days elapsing between February 13th and August 12th; this, then, determined the formation, subsequent to quarrying activities, of a quarry front that was approximately 6.3 metres in height.

On a nearby quarry front (Figs. 2 and 5), carved into the face like a large horizontal niche, several other painted quarry inscriptions are visible, repeated exactly in the same way vertically six times mentioning only the single Latin letters “A, B, C”, placed one under the other at a regular distance of 22 - 25 cm, and followed by five particular signs of a kind of letter E on its side or small fork (Fig. 6).

Dating of the two epigraphic contexts

Unfortunately, no surviving elements provide a date for the inscriptions painted on the two quarry fronts. Therefore, other aspects of the quarry topography must be taken into consideration to reach an approximate dating of these *tituli picti*. Important are the location and the height of the two walls examined, within the broader scheme of the southern front of the quarry

in the Bacakale district. The wall bearing vertical letter sequences is located at about 10 metres above the ancient quarry floor, whereas the adjacent one with painted dates is situated higher to the left. They presumably are the result of medium-advanced quarrying activities of the Bacakale basin in the *Docimium* district, which was opened during the mid-Augustan period, that is, the last decades of the first century B.C. A clear chronological limit for the final mining of Bacakale when the bottom of the quarry was reached is given by the discovery of three blocks inscribed with three different consular dates relative to 144, 148 and 157 A.D.¹² This suggests that the end of quarrying activities in the Bacakale basin took place toward the mid-second century, while the basin was filled with debris from the surrounding areas at a later date.¹³ The high position of the two walls compared to the bottom of the quarry is therefore a further chronological reference, which not only pushes their hypothetical dating to the first half of the second century A.D., but perhaps even before – namely the end of the first and the beginning of the second century.

11 The different dates should have been painted on the quarry face at the end of the mining operations at the lower limit of the trench. This would seem especially corroborated by the analysis of the working traces that change towards them and are different in the following sections.

12 Three blocks have been found on the bottom of the quarry and they belong to group 3 catalogued by Fant in the early eighties of the last century. The three blocks, cat. 83, 93 and 124, are dated respectively to 144, 148 and 157 A. D. FANT 1989, 42-48.

13 The blocks of group 4 were instead a bit higher up, on a consistent elevation of the ground level of the quarry, and probably in front of the two faces in question, see FANT 1989 p. 44, Fig. 9 and p. 46, Fig. 11. Their position would seem unordered and probably determined by the reversal of blocks and debris into the large quarry pit of Bacakale, even if their dating is relatively homogeneous, and refers to the early third century A.D., FANT 1989, 45, Tab. 9.

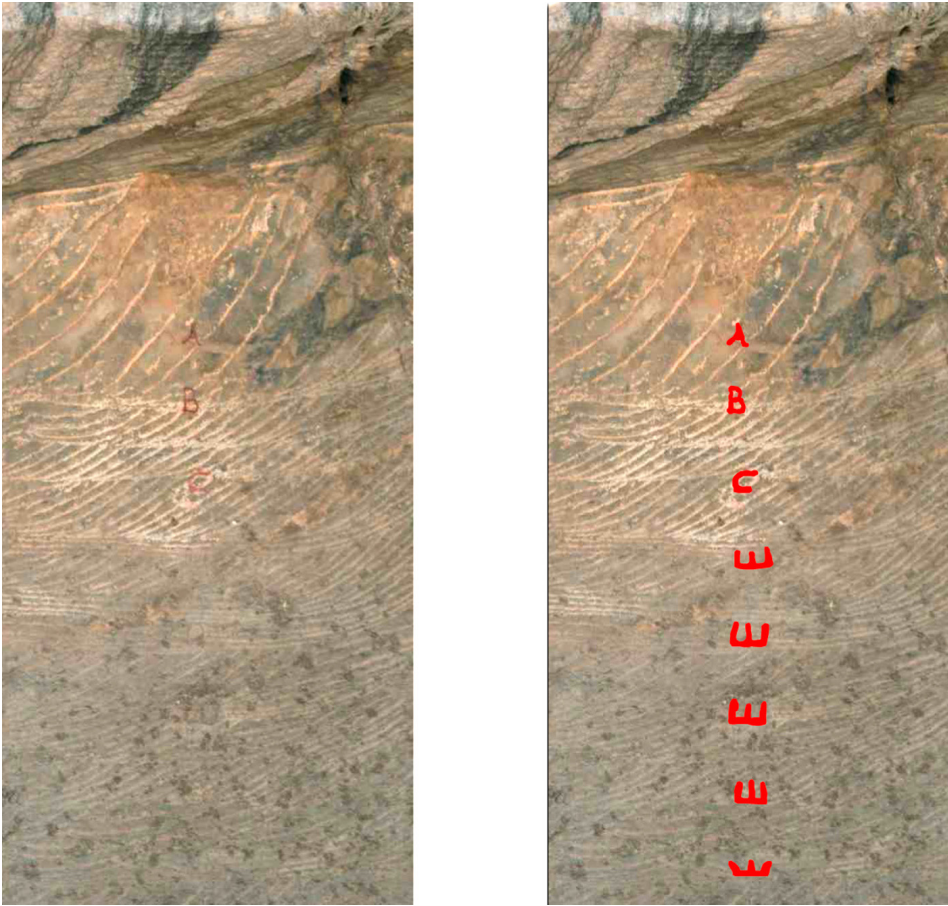


Fig. 6.
Detail of the fifth vertical
sequence of wall “B”. To the
left the “staus quo”, to the
right the letters and symbols
graphically highlighted in red

Epigraphic and typological comparisons

The painted inscriptions bearing dates bring to mind the examples discovered in recent years on the foundation walls and the overhead south-western exedra in the Baths of Trajan located on the Oppius Hill in Rome.¹⁴ These dates obviously refer to a few years prior to the inauguration of the building in 109 A.D. and are assumed to have had a functional meaning for the imperial work-yard from an executive, structural, organizational and economic standpoint. While the two groups of inscriptions were painted in the same manner, with the same red, and in similar sizes, their arrangement demonstrates an obvious and substantial difference. In fact, construction of the Baths of Trajan proceeded from the bottom upwards, whereas the quarry front in Bacakale developed in the opposite direction, being excavated from top to bottom.

The dates painted in the Baths of Trajan are not the only inscriptions of this kind on a Roman monument; similar inscriptions have been discovered engraved within the Porta Nigra in Trier (Germany) which was inaugurated and dedicated to Septimius Severus and

Caracalla in 197-198.¹⁵ Initials engraved with dates were found on different blocks in the rows standing on the internal curved side on the third floor of the western tower of the Gate.¹⁶ In this case again the sequence of dates was developed from bottom to top, beginning with the first, July 29th, to the last, August 7th,¹⁷ therefore indicating that approximately half of the storey was built in only 10 days. Again, there is no indication of the year, but one might suppose that the year of reference is only shortly prior to the date in which the Gate itself was inaugurated, since it stands in the topmost part of the building.

The only case of similar inscriptions with dates found in a quarry, however are those dating back to Augustan period found in the underground quarries at Massignano in the Conero Mountain close to the city of Ancona in Italy, a extraction site in which a white limestone was extracted.¹⁸ On the quarry faces several

15 GOSE 1969; SCHWINDEN 2001, 143-153.

16 STEINHAUSEN 1969, 104-106; SCHWINDEN 2001, 150-152.

17 *CIL* XIII 3778 n. 115-126; STEINHAUSEN 1969, 104-105; SCHWINDEN 2001, 150-152.

18 PACI 2007.

14 VOLPE 2002; *id.* 2008; *id.* 2010; VOLPE, ROSSI 2012.

numeric or text inscriptions were discovered written in charcoal or painted with red; three of them are dates positioned in different parts of the underground gallery. One indicating the 25th of January was written with coal, while the 26th of January is twice repeated in red, the latter in combination with mentions of two men of the colony of Ancona. These three inscriptions, which represent the closest parallels in terms of context to those of *Docimium*, however, do not seem to indicate a controlled chronological mining sequence but rather the end of the mining process in these underground quarries.

Whereas in the second case of the Docimian painted inscriptions, namely the smaller face of the *antrum* bearing alphabetic letters and a “forked” motif in parallel vertical sequences from top to bottom, it has been impossible to find any detailed forms of comparison. Furthermore, in this specific case one cannot understand the need for such a close repetition of the vertical sequence of initials, which must have been affixed in connection with mining activities. The “forked” motif, repeated at least five times in one of the sequences, does not have a plausible explanation and would simply seem to be an identification mark – but unfortunately of unknown meaning.

Conclusions

At present, painted inscriptions on Roman quarry fronts are rare. Those discovered in the *Docimium* quarries are, in fact, an *unicum* in ancient Roman quarries, due to the fact that they represent an extraction sequence, while those discovered in the underground quarries at the Cone-ro Mountain are only single inscriptions; two of them with the same dates need further investigation. The six *Docimium* inscriptions indicate six different dates starting from top with the earliest, the 13th of February, and ending several meters below with the last, the 12th of August. Unfortunately, there is no further indication of the year, so that we cannot know exactly when they were painted on the quarry front, but their position on the lower part of the southern quarry front of the Bacakale district allows us to assume that they must belong to the last period of the extraction activity at Bacakale. This was probably a year at the end of the first or the beginning of the second century AD, when the activity at the site reached its lowest level. After a period when extraction stopped, the large quarry pit was filled up with debris coming from newer quarry pits nearby.

These painted inscriptions must certainly be connected with a systematic and precise control of the extraction activity in a special sector of the site where one of the most appreciated qualities of Phrygian marble was extracted. They were painted on the quarry front after several days of activity in order to have an exact control of the volume of marble extracted and the quantity of marble blocks produced for export. The sequence of

these painted *tituli* is helpful for an understanding that quarrying activities could proceed in a rather erratic way and that longer periods of time did not necessarily correspond to greater quantities being extracted. In addition, as manifested by period IV, from April 30th to July 14th and with a duration of 76 days, mining activities must have been subjected to a long interruption; during this time special skilled workers, known as *caesura*, must have been dispatched to other areas or *loci* within the *Docimium* district, and this is probably the reason why some *caesurae* were registered in different *loci* and *brachia* during the same year.¹⁹

Even if no similar inscriptions have so far been discovered in Roman quarries, parallels exist with painted inscriptions recently discovered on the brick surfaces of Trajan's Baths in Rome and with inscriptions engraved on blocks of the Porta Nigra in Trier. In these cases, the sequence of days went from the lowest level up to the impost level of the half-dome of the apse. All three contexts attest a very special control of high priority activities, two connected with imperial building projects (the Baths of Trajan, finished in AD 109, and the Porta Nigra, of the end of the second century) and the third with extraction activity in one of the most important imperial quarries, where yearly production, probably only of some specific sectors, was strictly controlled by the imperial quarry administration.

19 See CHRISTOL, DREW-BEAR 1987, 106; FANT 1989, p. 20, tab. 2, pp. 52-69, tab. 11; PENSABENE 2011, 97-98.

BIBLIOGRAPHY

- BRUNO M. 2017: “*Tituli picti* su due fronti di cava nel distretto di Bacakale a *Docimium* (Iscehisar, Afyonkarahisar, Turchia)”, *Journal of Roman Archaeology* 30, 469-489.
- BRUNO M., ATTANASIO D., PROCHASKA W. 2012: “I marmi docimeni dei gruppi scultorei dell’antro di Tiberio a Sperlonga”, in G. GHINI, Z. MARI (eds.): *Atti del Convegno, Ottavo Incontro di Studi sul Lazio e la Sabina, Roma 30 – 31 marzo, 1 aprile 2011, Lazio e Sabina* 8, Roma, 403-417.
- BRUNO M., ATTANASIO D., PROCHASKA W. 2015: “The Docimium Marble Sculptures of the Grotto of Tiberius at Sperlonga”, *AJA* 119, n. 3, 375-394.
- CHRISTOL M., DREW-BEAR TH. 1986: “Documents latins de Phrygie”, *Thyche* I, 62-87.
- CHRISTOL M., DREW-BEAR TH. 1987: “Inscriptions de Dokimeion”, *Anatolia Antiqua* 1, 83-137.
- CHRISTOL M., DREW-BEAR TH. 1991: “Les Carrières de Dokimeion à l’époque sévérienne”, *Epigraphica* 53, 113-174.
- DREW-BEAR TH. 1994: “Nouvelles inscriptions de Dokimeion”, *MEFRA* 106, 747-844.
- FANT J. C. 1989: *Cavum Antrum Phrygiae. The Organization and Operations of the Roman Imperial Marble Quarries in Phrygia*. BAR. International Series no. 482, Oxford.
- GOSE E. 1969: “Die Porta Nigra in Trier”, *Trierer Grabungen und Forschungen* 4, Berlin.
- INVERNIZZI A. 1994: *Il Calendario. Vita e Costumi dei Romani antichi* 16, Roma.
- PACI G. 2007: “Le iscrizioni della cava romana del Cone-ro”, in G. PACI (ed.): *Contributi all’epigrafia d’età augustea. Actes de la XIII^e rencontre Franco-Italienne sur l’epigraphie du Monde Romain*, Macerata, 9 – 11 settembre 2005, Tivoli, 217-246.
- PENSABENE P. 2011: “Cave di marmo bianco e pavonaz-zetto in Frigia. Sulla produzione e sui dati epigrafici”, *Marmora* 6, 71-134.
- PENSABENE P. 2013: *I marmi nella Roma antica*, Roma.
- RÖDER J. 1971: “*Marmor Phrygium*. Die antiken Marmorbrüche von Iscehisar in Westanatolien”, *JdI* 86, 253-312.
- SCHWINDEN L. 2001: “Die Porta Nigra”, in H.-P. KUHNEN (ed.): *Das römische Trier*, Stuttgart, 143-157.
- STEINHAUSEN J. 1969: “Die Steinmetzzeichen und sonstige Mauerinschriften”, in E. GOSE 1969, 87-106.
- VOLPE R. 2002: “Un antico giornale di cantiere delle terme di Traiano”, in *Cantieri antichi. Giornata di Studio tenuta il 25 ottobre 2001*, RM109, 376-394.
- SUMMERER L., VON KIENLIN A., BRUNO M. 2009: “Afyon, Roma ve Mermer”, in *Atlas*, n. 119, 112 - 113.