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CONTENT

PRESENTATION	15
NECROLOGY: NORMAN HERZ (1923-2013) by Susan Kane	17
1. APPLICATIONS TO SPECIFIC ARCHEOLOGICAL QUESTIONS – USE OF MARBLE	
Hermaphrodites and Sleeping or Reclining Maenads: Production Centres and Quarry Marks <i>Patrizio Pensabene</i>	25
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 <i>Massimiliano David, Stefano Succi and Marcello Turci</i>	33
Alabaster. Quarrying and Trade in the Roman World: Evidence from Pompeii and Herculaneum <i>Simon J. Barker and Simona Perna</i>	45
Recent Work on the Stone at the Villa Arianna and the Villa San Marco (Castellammare di Stabia) and Their Context within the Vesuvian Area <i>Simon J. Barker and J. Clayton Fant</i>	65
Marble Wall Decorations from the Imperial Mausoleum (4 th C.) and the Basilica of San Lorenzo (5 th C.) in Milan: an Update on Colored Marbles in Late Antique Milan <i>Elisabetta Neri, Roberto Bugini and Silvia Gazzoli</i>	79
Sarcophagus Lids Sawn from their Chests <i>Dorothy H. Abramitis and John J. Herrmann</i>	89
The Re-Use of Monolithic Columns in the Invention and Persistence of Roman Architecture <i>Peter D. De Staebler</i>	95
The Trade in Small-Size Statues in the Roman Mediterranean: a Case Study from Alexandria <i>Patrizio Pensabene and Eleonora Gasparini</i>	101
The Marble Dedication of Komon, Son of Asklepiades, from Egypt: Material, Provenance, and Reinforcement of Meaning <i>Patricia A. Butz</i>	109
Multiple Reuse of Imported Marble Pedestals at Caesarea Maritima in Israel <i>Barbara Burrell</i>	117
Iasos and Iasian Marble between the Late Antique and Early Byzantine Eras <i>Diego Peirano</i>	123

Thassos, Known Inscriptions with New Data <i>Tony Kozelj and Manuela Wurch-Kozelj</i>	131
The Value of Marble in Roman <i>Hispalis</i> : Contextual, Typological and Lithological Analysis of an Assemblage of Large Architectural Elements Recovered at N° 17 Goyeneta Street (Seville, Spain) <i>Ruth Taylor, Oliva Rodríguez, Esther Ontiveros, María Luisa Loza, José Beltrán and Araceli Rodríguez</i>	143
<i>Giallo Antico</i> in Context. Distribution, Use and Commercial Actors According to New Stratigraphic Data from the Western Mediterranean (2 nd C. Bc – Late 1 st C. Ad) <i>Stefan Ardeleanu</i>	155
<i>Amethystus</i> : Ancient Properties and Iconographic Selection <i>Luigi Pedroni</i>	167
2. PROVENANCE IDENTIFICATION I: (MARBLE)	
Unraveling the Carrara – Göktepe Entanglement <i>Walter Prochaska, Donato Attanasio and Matthias Bruno</i>	175
The Marble of Roman Imperial Portraits <i>Donato Attanasio, Matthias Bruno, Walter Prochaska and Ali Bahadır Yavuz</i>	185
Tracing Alabaster (Gypsum or Anhydrite) Artwork Using Trace Element Analysis and a Multi-Isotope Approach (Sr, S, O) <i>Lise Leroux, Wolfram Kloppmann, Philippe Bromblet, Catherine Guerrot, Anthony H. Cooper, Pierre-Yves Le Pogam, Dominique Vingtain and Noel Worley</i>	195
Roman Monolithic Fountains and Thasian Marble <i>Annewies van den Hoek, Donato Attanasio and John J. Herrmann</i>	207
Archaeometric Analysis of the Alabaster Thresholds of Villa A, Oplontis (Torre Annunziata, Italy) and New Sr and Pb Isotopic Data for <i>Alabastro Ghiaccione del Circeo</i> <i>Simon J. Barker, Simona Perna, J. Clayton Fant, Lorenzo Lazzarini and Igor M. Villa</i>	215
Roman Villas of Lake Garda and the Occurrence of Coloured Marbles in the Western Part of “Regio X Venetia et Histria” (Northern Italy) <i>Roberto Bugini, Luisa Folli and Elisabetta Roffia</i>	231
Calcitic Marble from Thasos in the North Adriatic Basin: Ravenna, Aquileia, and Milan <i>John J. Herrmann, Robert H. Tykot and Annewies van den Hoek</i>	239
Characterisation of White Marble Objects from the Temple of Apollo and the House of Augustus (Palatine Hill, Rome) <i>Francesca Giustini, Mauro Brilli, Enrico Gallochio and Patrizio Pensabene</i>	247
Study and Archeometric Analysis of the Marble Elements Found in the Roman Theater at Aeclanum (Mirabella Eclano, Avellino - Italy) <i>Antonio Mesisca, Lorenzo Lazzarini, Stefano Cancelliere and Monica Salvadori</i>	255

Two Imperial Monuments in Puteoli: Use of Proconnesian Marble in the Domitianic and Trajanic Periods in Campania <i>Irene Bald Romano, Hans Rupprecht Goette, Donato Attanasio and Walter Prochaska</i>	267
Coloured Marbles in the Neapolitan Pavements (16 th And 17 th Centuries): the Church of <i>Santi Severino e Sossio</i> <i>Roberto Bugini, Luisa Folli and Martino Solito</i>	275
Roman and Early Byzantine Sarcophagi of Calcitic Marble from Thasos in Italy: Ostia and Siracusa <i>Donato Attanasio, John J. Herrmann, Robert H. Tykot and Annewies van den Hoek</i>	281
Revisiting the Origin and Destination of the Late Antique Marzamemi 'Church Wreck' Cargo <i>Justin Leidwanger, Scott H. Pike and Andrew Donnelly</i>	291
The Marbles of the Sculptures of Felix Romuliana in Serbia <i>Walter Prochaska and Maja Živić</i>	301
Calcitic Marble from Thasos and Proconnesos in Nea Anchialos (Thessaly) and Thessaloniki (Macedonia) <i>Vincent Barbin, John J. Herrmann, Aristotle Mentzos and Annewies van den Hoek</i>	311
Architectural Decoration of the Imperial Agora's Porticoes at Iasos <i>Fulvia Bianchi, Donato Attanasio and Walter Prochaska</i>	321
The Winged Victory of Samothrace - New Data on the Different Marbles Used for the Monument from the Sanctuary of the Great Gods <i>Annie Blanc, Philippe Blanc and Ludovic Laugier</i>	331
Polychrome Marbles from the Theatre of the Sanctuary of Apollo Pythios in Gortyna (Crete) <i>Jacopo Bonetto, Nicolò Mareso and Michele Bueno</i>	337
Paul the Silentiary, Hagia Sophia, Onyx, Lydia, and Breccia Corallina <i>John J. Herrmann and Annewies van den Hoek</i>	345
Incrustations from Colonia Ulpia Traiana (Near Modern Xanten, Germany) <i>Vilma Ruppiniè and Ulrich Schüssler</i>	351
Stone Objects from Vindobona (Austria) – Petrological Characterization and Provenance of Local Stone in a Historico-Economical Setting <i>Andreas Rohatsch, Michaela Kronberger, Sophie Insulander, Martin Mosser and Barbara Hodits</i>	363
Marbles Discovered on the Site of the Forum of Vaison-la-Romaine (Vaucluse, France): Preliminary Results <i>Elsa Roux, Jean-Marc Mignon, Philippe Blanc and Annie Blanc</i>	373
Updated Characterisation of White Saint-Béat Marble. Discrimination Parameters from Classical Marbles <i>Hernando Royo Plumed, Pilar Lapeunte, José Antonio Cuchí, Mauro Brillì and Marie-Claire Savin</i>	379

Grey and Greyish Banded Marbles from the Estremoz Anticline in Lusitania <i>Pilar Lapuente, Trinidad Nogales-Basarrate, Hernando Royo Plumed, Mauro Brilli and Marie-Claire Savin</i>	391
New Data on Spanish Marbles: the Case of <i>Gallaecia</i> (NW Spain) <i>Anna Gutiérrez García-M., Hernando Royo Plumed and Silvia González Soutelo</i>	401
A New Roman Imperial Relief Said to Be from Southern Spain: Problems of Style, Iconography, and Marble Type in Determining Provenance <i>John Pollini, Pilar Lapuente, Trinidad Nogales-Basarrate and Jerry Podany</i>	413
Reuse of the <i>Marmorata</i> from the Late Roman Palatial Building at Carranque (Toledo, Spain) in the Visigothic Necropolis <i>Virginia García-Entero, Anna Gutiérrez García-M. and Sergio Vidal Álvarez</i>	427
Imperial Porphyry in Roman Britain <i>David F. Williams</i>	435
Recycling of Marble: Apollonia/Sozousa/Arsuf (Israel) as a Case Study <i>Moshe Fischer, Dimitris Tambakopoulos and Yannis Maniatis</i>	443
Thasian Connections Overseas: Sculpture in the Cyrene Museum (Libya) Made of Dolomitic Marble from Thasos <i>John J. Herrmann and Donato Attanasio</i>	457
Marble on Rome's Southwestern Frontier: Thamugadi and Lambaesis <i>Robert H. Tykot, Ouahiba Bouzidi, John J. Herrmann and Annewies van den Hoek</i>	467
Marble and Sculpture at Lepcis Magna (Tripolitania, Libya): a Preliminary Study Concerning Origin and Workshops <i>Luisa Musso, Laura Buccino, Matthias Bruno, Donato Attanasio and Walter Prochaska</i>	481
The Pentelic Marble in the Carnegie Museum of Art Hall of Sculpture, Pittsburgh, Pennsylvania <i>Albert D. Kollar</i>	491
Analysis of Classical Marble Sculptures in the Michael C. Carlos Museum, Emory University, Atlanta <i>Robert H. Tykot, John J. Herrmann, Renée Stein, Jasper Gaunt, Susan Blevins and Anne R. Skinner</i>	501
3. PROVENANCE IDENTIFICATION II: (OTHER STONES)	
Aphrodisias and the Regional Marble Trade. The <i>Scaenae Frons</i> of the Theatre at Nysa <i>Natalia Toma</i>	513
The Stones of Felix Romuliana (Gamzigrad, Serbia) <i>Bojan Djurić, Divna Jovanović, Stefan Pop Lazić and Walter Prochaska</i>	523
Aspects of Characterisation of Stone Monuments from Southern Pannonia <i>Branka Migotti</i>	537

The Budakalász Travertine Production <i>Bojan Djurić, Sándor Kele and Igor Rižnar</i>	545
Stone Monuments from Carnuntum and Surrounding Areas (Austria) – Petrological Characterization and Quarry Location in a Historical Context <i>Gabrielle Kremer, Isabella Kitz, Beatrix Moshhammer, Maria Heinrich and Erich Draganits</i>	557
Espejón Limestone and Conglomerate (Soria, Spain): Archaeometric Characterization, Quarrying and Use in Roman Times <i>Virginia García-Entero, Anna Gutiérrez García-M, Sergio Vidal Álvarez, María J. Peréx Agorreta and Eva Zarco Martínez</i>	567
The Use of Alcover Stone in Roman Times (<i>Tarraco, Hispania Citerior</i>). Contributions to the <i>Officina Lapidaria Tarraconensis</i> <i>Diana Gorostidi Pi, Jordi López Vilar and Anna Gutiérrez García-M.</i>	577
4. ADVANCES IN PROVENANCE TECHNIQUES, METHODOLOGIES AND DATABASES	
Grainautline – a Supervised Grain Boundary Extraction Tool Supported by Image Processing and Pattern Recognition <i>Kristóf Csorba, Lilla Barancsuk, Balázs Székely and Judit Zöldföldi</i>	587
A Database and GIS Project about Quarrying, Circulation and Use of Stone During the Roman Age in <i>Regio X - Venetia et Histria</i> . The Case Study of the Euganean Trachyte <i>Caterine Previato and Arturo Zara</i>	597
5. QUARRIES AND GEOLOGY	
The Distribution of Troad Granite Columns as Evidence for Reconstructing the Management of Their Production <i>Patrizio Pensabene, Javier Á. Domingo and Isabel Rodà</i>	613
Ancient Quarries and Stonemasonry in Northern Choria Considiana <i>Hale Güney</i>	621
Polychromy in Larisaeon Quarries and its Relation to Architectural Conception <i>Gizem Mater and Ertunç Denктаş</i>	633
Euromos of Caria: the Origin of an Hitherto Unknown Grey Veined Stepped Marble of Roman Antiquity <i>Matthias Bruno, Donato Attanasio, Walter Prochaska and Ali Bahadır Yavuz</i>	639
Unknown Painted Quarry Inscriptions from Bacakale at <i>Docimium</i> (Turkey) <i>Matthias Bruno</i>	651
The Green Schist Marble Stone of Jebel El Hairech (North West of Tunisia): a Multi-Analytical Approach and its Uses in Antiquity <i>Ameur Younès, Mohamed Gaied and Wissem Gallala</i>	659
Building Materials and the Ancient Quarries at <i>Thamugadi</i> (East of Algeria), Case Study: Sandstone and Limestone <i>Younès Rezkallah and Ramdane Marmi</i>	673

The Local Quarries of the Ancient Roman City of <i>Valeria</i> (Cuenca, Spain) <i>Javier Atienza Fuente</i>	683
The Stone and Ancient Quarries of Montjuïc Mountain (Barcelona, Spain) <i>Aureli Álvarez</i>	693
<i>Notae Lapidinarum</i> : Preliminary Considerations about the Quarry Marks from the Provincial Forum of <i>Tarraco</i> <i>Maria Serena Vinci</i>	699
The Different Steps of the Rough-Hewing on a Monumental Sculpture at the Greek Archaic Period: the Unfinished Kouros of Thasos <i>Danièle Braunstein</i>	711
A Review of Copying Techniques in Greco-Roman Sculpture <i>Séverine Moureaud</i>	717
Labour Forces at Imperial Quarries <i>Ben Russell</i>	733
Social Position of Craftsmen inside the Stone and Marble Processing Trades in the Light of Diocletian's Edict on Prices <i>Krešimir Bosnić and Branko Matulić</i>	741
6. STONE PROPERTIES, WEATHERING EFFECTS AND RESTORATION, AS RELATED TO DIAGNOSIS PROBLEMS, MATCHING OF STONE FRAGMENTS AND AUTHENTICITY	
Methods of Consolidation and Protection of Pentelic Marble <i>Maria Apostolopoulou, Elissavet Drakopoulou, Maria Karoglou and Asterios Bakolas</i>	749
7. PIGMENTS AND PAINTINGS ON MARBLE	
Painting and Sculpture Conservation in Two Gallo-Roman Temples in Picardy (France): Champlieu and Pont-Sainte-Maxence <i>Véronique Brunet-Gaston and Christophe Gaston</i>	763
The Use of Colour on Roman Marble Sarcophagi <i>Eliana Siotto</i>	773
New Evidence for Ancient Gilding and Historic Restorations on a Portrait of Antinous in the San Antonio Museum of Art <i>Jessica Powers, Mark Abbe, Michelle Bushey and Scott H. Pike</i>	783
Schists and Pigments from Ancient Swat (Khyber Pukhtunkhwa, Pakistan) <i>Francesco Mariottini, Gianluca Vignaroli, Maurizio Mariottini and Mauro Roma</i>	793
8. SPECIAL THEME SESSION: „THE USE OF MARBLE AND LIMESTONE IN THE ADRIATIC BASIN IN ANTIQUITY”	
Marble Sarcophagi of Roman Dalmatia Material – Provenance – Workmanship <i>Guntram Koch</i>	809

Funerary Monuments and Quarry Management in Middle Dalmatia <i>Nenad Cambi</i>	827
Marble Revetments of Diocletian's Palace <i>Katja Marasović and Vinka Marinković</i>	839
The Use of Limestones as Construction Materials for the Mosaics of Diocletian's Palace <i>Branko Matulić, Domagoj Mudronja and Krešimir Bosnić</i>	855
Restoration of the Peristyle of Diocletian's Palace in Split <i>Goran Nikšić</i>	863
Marble Slabs Used at the Archaeological Site of Sorna near Poreč Istria – Croatia <i>Đeni Gobić-Bravar</i>	871
Ancient Marbles from the Villa in Verige Bay, Brijuni Island, Croatia <i>Mira Pavletić and Đeni Gobić-Bravar</i>	879
Notes on Early Christian Ambos and Altars in the Light of some Fragments from the Islands of Pag and Rab <i>Mirja Jarak</i>	887
The Marbles in the Chapel of the Blessed John of Trogir in the Cathedral of St. Lawrence at Trogir <i>Đeni Gobić-Bravar and Daniela Matetić Poljak</i>	899
The Use of Limestone in the Roman Province of Dalmatia <i>Edisa Lozić and Igor Rižnar</i>	915
The Extraction and Use of Limestone in Istria in Antiquity <i>Klara Buršić-Matijašić and Robert Matijašić</i>	925
Aurisina Limestone in the Roman Age: from Karst Quarries to the Cities of the Adriatic Basin <i>Caterina Previato</i>	933
The Remains of Infrastructural Facilities of the Ancient Quarries on Zadar Islands (Croatia) <i>Mate Parica</i>	941
The Impact of Local Geomorphological and Geological Features of the Area for the Construction of the Burnum Amphitheatre <i>Miroslav Glavičić and Uroš Stepišnik</i>	951
Roman Quarry Klis Kosa near Salona <i>Ivan Alduk</i>	957
Marmore Lavdata Brattia <i>Miona Miliša and Vinka Marinković</i>	963
Quarries of the Lumbarda Archipelago <i>Ivka Lipanović and Vinka Marinković</i>	979

Island of Korčula – Importer and Exporter of Stone in Antiquity <i>Mate Parica and Igor Borzić</i>	985
Faux Marbling Motifs in Early Christian Frescoes in Central and South Dalmatia: Preliminary Report <i>Tonči Borovac, Antonija Gluhan and Nikola Radošević</i>	995
INDEX OF AUTHORS	1009

ROMAN QUARRY KLIS KOSA NEAR SALONA

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Abstract

Gradina is an archeological site at Klis-Kosa, a few miles to the east of the ancient city of Salona, on the west slopes of Mosor mountain. On this site are preserved remains of ancient Roman dwellings and workshops of stonecutters in which they also had a shrine dedicated to Jupiter.

Keywords

Roman quarries, Mt. Mosor, Salona

Salona was the largest city and the capital of the Roman province of Dalmatia, with a continuity of settlements dating from the Bronze Age. It was the port of the Illyrian tribe he Delmatae. In the 1st century BC Salona supported Caesar in the war with Pompey, got the status of Roman colony and became the center of the province of Illyricum, later Dalmatia. The city is divided into three parts. The oldest is the central part, Urbs Vetus with the remains of the Forum, Capitolium, theatre. The city grew and new walls from the end of the 2nd century incorporated suburbs to the east and west of the old city core. Salona was at the peak of its development during the reign of Diocletian and his immediate successors, i.e., at the end of the 3rd and in the first half of the 4th century.

Christianity appeared during the 3rd century and was followed by persecutions under the Roman Emperor Diocletian. The city center moved from the Forum to the east at the end of the 4th century, when Christian complex with double basilicas, a baptistery and an episcopal palace was raised. Cemeteries Manastirine, Marusinac and Kapljuč developed around large basilicas dedicated to Christian martyrs, which were raised on pagan necropolises. The city fell to the Avars and Slavs around 640 AD. During the early Middle Ages (9th-11th c.), one of the centers of the Croatian principality and kingdom was developed around Salona.

In archaeological literature, the archaeological site at Klis-Kosa has been known since the late 19th century. It is located near the hamlet of Bralići (not UVODIĆ as is often claimed), on the north side of the “glen” called Korita, which runs from Mosor down to Klis Kosa in an east-west direction. (Fig. 1) The architectural complex is situated on several terraces that handle the steep sides of the

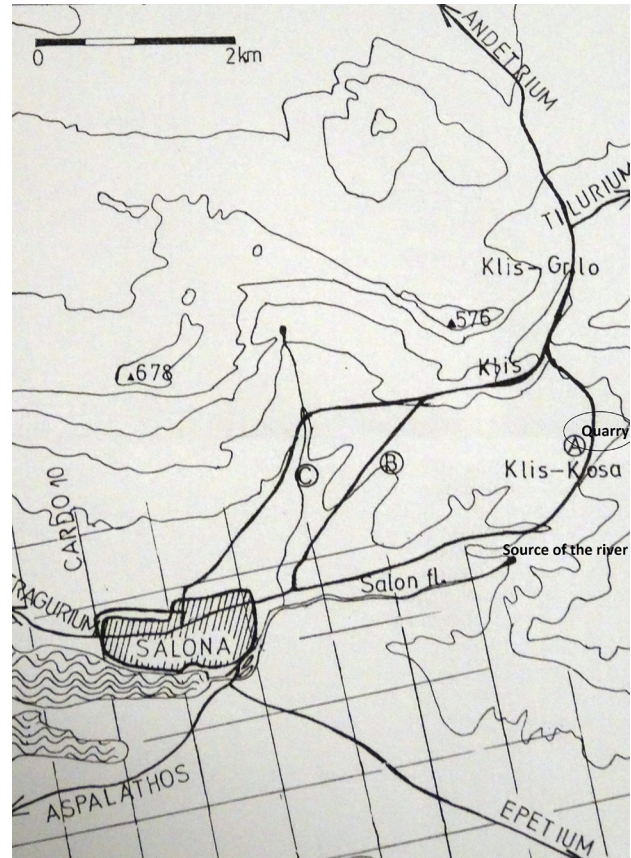


Fig. 1. Salona and the surrounding area - A, B, C: Roman roads to Klis (MILETIĆ 1993, 138)

“glen”. It occupies an area of about 1.5 to 2 hectares and dry stone walls once defined it on the south and partly on the west and east side. Some of the blocks in the walls are impressive in size, especially in the southeast corner. Within the complex there are visible small quadrangular buildings, door sills, architraves, and impressive steps cut into the rock on the west side. The north side ends with a cliff and on its west side there is an inscription inside the niche measuring about 1 x 1 meter:

I(ovi) O(ptimo) M(aximo)
SACRUM
L(ucius) EGNATIVS L(uci) F(ilius)
CN(ei) NEP(os) CN(ei) PRO(nepos)
TRO(omentina) CLEMEN(s)
DECVR(io) ET AVGV(r)

(Dedicated to Jupiter the best and the greatest, Lucius Egnatius son of Lucius, grandson of Gneus,



Fig. 2.
View onto the site from the south
(photo: I. Alduk)

great-grandson of Gneus, from the *Tromentina tribus*, Clemens, city councillor and priest)¹.

The inscription is clearly readable even though the rainwater flowing down the rock has partly damaged it, especially the letters in the last row. (Fig. 3) Judging solely by the dedicatory inscription to Jupiter and to some extent by parts of the architecture (*opus quadratum*), the complex was built at the beginning of the 1st century AD.² Although partly investigated some 30 years ago, a large building complex on the slopes of Mosor - Gradina or Oltarine³ at Klis Kosa - remains an enigma in terms of its content, organization, functioning, and the reason for its construction. Although this is often forgotten, F. Bulić knew of this site and the inscription was published in CIL III.⁴ Frane Buškariol re-introduced the site into scholarly literature starting with the research and documentation. (Fig. 2) To an extent, he explained the strategic role of this site as a place that could protect Salona in the event of an enemy breakthrough over Mosor mountain.⁵ Bearing in mind the other sites on the southwestern part of Mosor (Kapina, Kučinski doci) this assumption is possible.⁶ But

Buškariol repeatedly emphasized that at Gradina there was no prehistoric pottery. So later he rejected strategic function and left open the possibility that the complex had a sacred and/or residential character.⁷

Here we will try to go a step further and put Oltarine or Gradina in the context of the surrounding area. Partly and very briefly it was already done in terms of the function of one of the roads from Salona to Klis (over today's Klis Kosa) by the side of which the River Jadro rises and, which is more important, are the quarries on the Mosor mountain.⁸

In the archaeological literature we can find some special features of ancient (Roman) architecture in Salona.⁹ One of these special features is the usage of large blocks of local stone called *modrac* with or without use of lime mortar for construction of some buildings. Although these "megalithic" blocks, because of their functionality, are present in the architecture of Salona throughout its history, they are more common in the earlier constructions of the 1st century BC and the 1st century AD, or within the oldest part of the city (the so-called *Urbs Vetus*) and in the construction of the early burial plots (*hortus*, *hortoi*): *murazzo* of the burial plot called "in *horto Metrodori*" but also others, a complex of buildings north of the Forum, the bridge called "Five bridges", the oldest part of the city walls at *Porta Caesarea* and paved roads inside the gate, parts of the theater (Fig. 6),

1 English translation was made at the request of the editorial board.

2 BUŠKARIOL 1987, 30-31; PROTIĆ, BUŠKARIOL 1990, 142, There are even some medieval finds on this site, PROTIĆ, BUŠKARIOL 1990, 142.

3 Gradina - hillfort. Oltarine - great or large altars.

4 BULIĆ 1890, 150; BULIĆ 1903, 114; CIL III 1942.

5 BUŠKARIOL 1987, 178-179; BUŠKARIOL 1987a, 30-31; LONGAE SALONAE II, 4.

6 ALDUK 2013, 32.

7 PROTIĆ, BUŠKARIOL 1990, 142.

8 CAMBI 2000, 86.

9 RENDIĆ 1980.



Fig. 3. Plan of the site (S. Božić, M. Čorić, A. Šundov)

parts of the Capitolium, parts of the city aqueduct.¹⁰ Such blocks can be easily extracted from the slopes of Mosor near Klis Kosa; alongside “ordinary” limestone, they are found on the surface and break off into regular shapes, most often in the form of elongated plates or blocks which then require minimal processing.¹¹ Inscription of L. E. CLEMENS dates back to the time when the largest number of the mentioned buildings were erected in Salona, in the construction of which such large blocks were used. Can we therefore assume that in this complex there are the remains of dwellings and workshops of stonecutters in which they also had a shrine dedicated to Jupiter? The stone blocks excavated there were used almost exclusively as building material because this stone is not suitable for architectural decoration. In support of this

10 RENDIĆ 1980, 92-96.

11 It is also possible that this kind of stone was extracted closer to the city i.e. somewhere on the slopes of Kozjak mountain, but still there are no remains to confirm this hypothesis.

hypothesis here are some facts, more or less convincing.

The remains of quarrying on the western edge of the complex in the 80s were interpreted as a small quarry.¹² The terraces of the complex, which are supported by large stone blocks, could also originate from the large amount of waste generated from the processing of stone. (Fig. 4) For some blocks of stone that are found all over the site (thresholds, architraves, ordinary blocks) we will have to determine whether they are parts of buildings or are semi-finished products (incomplete or damaged products). Of course, over the entire surface of the complex, particularly around the inscription, in several places there are the remnants of rock processing that we can see in other ancient quarries: step-shaped surfaces (Fig. 5), cuts, grooves and other traces of stone cutting. Although it is located directly below the inscription, the assumed water cistern probably had no cult function but served the residents of the complex. It is located very logically, at the bottom of a steep cliff and the surface of

12 LONGE SALONE II, 40.

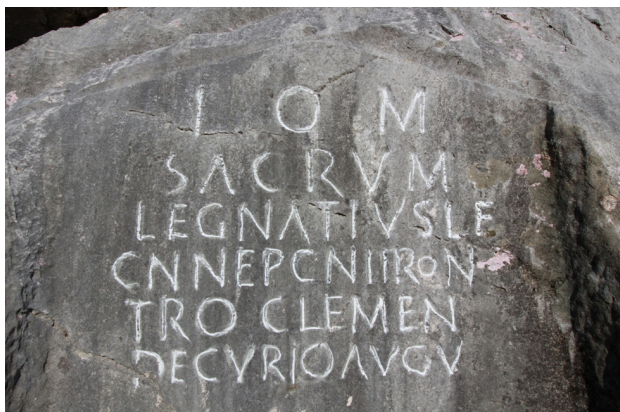


Fig. 4. Inscription dedicated to Jupiter (photo: I. Alduk)



Fig. 5. Southern part of the site with drystone wall of large blocks (photo: I. Alduk)

the cliff is interrupted by elongated steps/channels that probably collect rain water for the cistern.

The fact is that the quarry is located about a hundred meters above the presumed Roman road through Klis Kosa. This road to Salona descends constantly (from the Klis Pass to Salona) which greatly facilitates the transport of stone, especially of long and heavy blocks.¹³

It is also necessary to point out that there is a possibility that due to the size of the complex, the dedication to Jupiter and function of dedicator (decursion-city councillor/augur-priest), this is some kind of official enterprise. All the more so because most of the mentioned buildings in Salona built with these blocks are of a public and official character. Also, it looks as if Lucius Egnatius Clemens was very active in the early Salona community and he is confirmed

13 BUŠKARIOL 1987, 30.



Fig. 6. Steps carved in stone (photo: I. Alduk)

as augur in another inscription from Salona and indirectly through the inscription of one of his freedmen.¹⁴

The inscription in Klis Kosa is likely to be seen in the context of Jupiter as the supreme and most popular deity and not in the context of the presumed quarry. Quarries in Dalmatia are associated almost exclusively with the cult of Hercules or Heracles.¹⁵ However, Hercules, or Saxsanus combined with Jupiter occurs in one altar from Šmartno on Pohorje near Ptuj (Slovenia) near the local large quarries.¹⁶ A dedication exclusively to Jupiter and also related with a quarry was recorded on one altar from Škrip on the island of Brač. On that inscription, the centurion Titus Flavius Pompey was the head of works at the amphitheater “...curam agens fab(ricae) am(phiteatri)...” probably in Salona.¹⁷

As for the residents or users of the complex at Klis Kosa, or workers in the Mosor quarries we can say almost nothing. Most of them were probably slaves. However

14 MATIJEVIĆ 2006, 149.

15 SANADER 1994, 90-91, 98-99, 102-103; MARŠIĆ 2007.

16 DJURIĆ 2004, 158-159, 169.

17 KIRIGIN 1979, 129-134.



Fig. 7.
Part of the Roman theater in Salona built with large blocks of stone (photo: I. Alduk)

Salona had a guild, or perhaps several guilds, (*collegia*) of stonecutters. One of the inscriptions mentions “(co) *llegium (la)pidarior(um)*”.¹⁸

This short article has not nearly completed discussion of Gradina in Klis Kosa. Here we have tried to explain an idea that needs more time and work. Of course, the outcome is uncertain. But it is precisely such work that can bring new and interesting conclusions about the organization of Salona at the time of its establishment as the capital of Illyricum or Roman Dalmatia.

BIBLIOGRAPHY

- ALDUK I. 2013: “Arheološka topografija jugozapadnog dijela Mosora”, *Tusculum* 6, 25-33.
- BULIĆ F. 1890: “Osservazioni alle iscrizioni dalmatiche pubblicate nel C.I.L. III e Bull. Dalm”, *Bulletino di archeologia e storia dalmata* XIII, 150-152.
- BUŠKARIOL F. 1987: “Bilice kod Solina-Klis-Grlo”, *Obavijesti Hrvatskog arheološkog društva* 1/XIX, 29-32.
- BUŠKARIOL F. 1987a: “Općina Solin-Rekögnosciranje”, *Arheološki pregled* 27, 178-179.
- CAMBI N. 2000: “Važnost Klisa u antici”, *Mogućnosti* 4/6, 83-91.
- DJURIĆ B. 2004: “V Saksanovem svetu-Rimsko pridobivanje belega marmorja s Pohorja”, in *RIMLJANI – steklo, glina, kamen, Celje/Ptuj/Maribor (katalog izložbe)*, 147-202.
- KIRIGIN B. 1979: “Nalaz rimskih natpisa i reljefa kod Škripa na otoku Braču”, *Vjesnik za arheologiju i historiju dalmatinsku* LXXII-LXXIII, 129-142.
- LONGAE SALONAE II, *Ilustracije*, (Emilio Marin ed.), Split 2002.
- MARŠIĆ D. 2007: “Novi Heraklov žrtvenik iz Trogira”, *Archaeologia Adriatica* I, 111-128.
- MATIJEVIĆ I. 2006: “Neobjavljeni natpisi iz Žrnovnice i Salone”, *Vjesnik za arheologiju i povijest dalmatinsku* 99, 145-152.
- MILETIĆ Ž. 1993: “Rimske ceste između Jadera, Burnuma i Salone”, *Radovi Filozofskog fakulteta u Zadru*, 32 (19), 117-150.
- PROTIĆ G., BUŠKARIOL F. 1990: “Klis/Grlo, Klis-Kosa-Salona, istraživanje agera”, *Arheološki pregled* 26/1988, 139-143.
- RENDIĆ-MIOČEVIĆ D. 1980: “Iz ranije salonitanske graditeljske tradicije”, in M. SUIĆ, M. ZANINOVIĆ (eds.): *Materijali, tehnike i strukture predantičkog i antičkog graditeljstva na istočnom jadranskom prostoru: znanstveni kolokvij održan u Zadru od 6. do 8. XII 1976*, Zagreb, 91-99.
- SANADER M. 1994: “O kultu Herkula u Hrvatskoj”, *Opuscula Archaeologica* 18, 87-114.