The Winged Victory of Samothrace - New Data on the Different Marbles Used for the Monument from the Sanctuary of the Great Gods

Blanc, Annie; Blanc, Philippe; Laugier, Ludovic

Source / Izvornik: ASMOSIA XI, Interdisciplinary Studies on Ancient Stone, Proceedings of the XI International Conference of ASMOSIA, 2018, 331 - 335

Conference paper / Rad u zborniku

Publication status / Verzija rada: Published version / Objavljena verzija rada (izdavačev PDF)

https://doi.org/10.31534/XI.asmosia.2015/02.17

Permanent link / Trajna poveznica: https://urn.nsk.hr/urn:nbn:hr:123:253899

Rights / Prava: In copyright/Zaštićeno autorskim pravom.

Download date / Datum preuzimanja: 2025-04-02



Repository / Repozitorij:

FCEAG Repository - Repository of the Faculty of Civil Engineering, Architecture and Geodesy, University of Split







ASMOSIA XI

Interdisciplinary Studies on Ancient Stone

PROCEEDINGS

of the XI ASMOSIA Conference, Split 2015

Edited by Daniela Matetić Poljak and Katja Marasović







Interdisciplinary Studies on Ancient Stone Proceedings of the XI ASMOSIA Conference (Split 2015)

Publishers:

ARTS ACADEMY IN SPLIT UNIVERSITY OF SPLIT

and

UNIVERSITY OF SPLIT FACULTY OF CIVIL ENGINEERING, ARCHITECTURE AND GEODESY

Technical editor: Kate Bošković

English language editor: Graham McMaster

Computer pre-press: Nikola Križanac

> Cover design: Mladen Čulić

Cover page:

Sigma shaped mensa of pavonazzetto marble from Diocletian's palace in Split

ISBN 978-953-6617-49-4 (Arts Academy in Split)
ISBN 978-953-6116-75-1 (Faculty of Civil Engineering, Architecture and Geodesy)

e-ISBN 978-953-6617-51-7 (Arts Academy in Split) e-ISBN 978-953-6116-79-9 (Faculty of Civil Engineering, Architecture and Geodesy)

CIP available at the digital catalogue of the University Library in Split, no 170529005

ASMOSIA XI

Interdisciplinary Studies of Ancient Stone

Proceedings of the Eleventh International Conference of ASMOSIA, Split, 18–22 May 2015

> Edited by Daniela Matetić Poljak Katja Marasović









	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 Patrizio Pensabene	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 Massimiliano David, Stefano Succi and Marcello Turci	22
	Alabaster. Quarrying and Trade in the Roman World: Evidence from Pompeii and Herculaneum	
	Simon J. Barker and Simona Perna	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 Simon J. Barker and J. Clayton Fant	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 Dorothy H. Abramitis and John J. Herrmann	89
	The Re-Use of Monolithic Columns in the Invention and Persistence of Roman Architecture Peter D. De Staebler	95
	The Trade in Small-Size Statues in the Roman Mediterranean: a Case Study from Alexandria Patrizio Pensabene and Eleonora Gasparini	101
	•	101
	The Marble Dedication of Komon, Son of Asklepiades, from Egypt: Material, Provenance, and Reinforcement of Meaning Patricia A. Butz	109
	Multiple Reuse of Imported Marble Pedestals at Caesarea Maritima in Israel Barbara Burrell	117
	Iasos and Iasian Marble between the Late Antique and Early Byzantine Eras	123

	Thassos, Known Inscriptions with New Data Tony Kozelj and Manuela Wurch-Kozelj	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)	
	· · · · · · · · · · · · · · · · · · ·	
	Ruth Taylor, Oliva Rodríguez, Esther Ontiveros, María Luisa Loza,	1.42
	José Beltrán and Araceli Rodríguez	143
	Giallo Antico 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)	
	Stefan Ardeleanu	155
	Augsthustus, Amaient Duopouties and Isomographic Colostion	
	Amethystus: Ancient Properties and Iconographic Selection Luigi Pedroni	167
	278,7 200,000	
2.	PROVENANCE IDENTIFICATION I: (MARBLE)	
	Unraveling the Carrara – Göktepe Entanglement	
	Walter Prochaska, Donato Attanasio and Matthias Bruno	175
	Transfer Trochasta, Donato Ittanasio ana Fiannas Drano	173
	The Marble of Roman Imperial Portraits	
	Donato Attanasio, Matthias Bruno, Walter Prochaska and Ali Bahadir Yavuz	185
	Tracing Alabaster (Gypsum or Anhydrite) Artwork Using Trace Element Analysis	
	and a Multi-Isotope Approach (Sr, S, O)	
	Lise Leroux, Wolfram Kloppmann, Philippe Bromblet, Catherine Guerrot,	
	Anthony H. Cooper, Pierre-Yves Le Pogam, Dominique Vingtain and Noel Worley	195
	Thintony 11. Cooper, There Ives De Logani, Dominique vingiain and Ivel Worldy	173
	Roman Monolithic Fountains and Thasian Marble	
	Annewies van den Hoek, Donato Attanasio and John J. Herrmann	207
	Archaeometric Analysis of the Alabaster Thresholds of Villa A, Oplontis	
	(Torre Annunziata, Italy) and New Sr and Pb Isotopic Data for	
	Alabastro Ghiaccione del Circeo	
	Simon J. Barker, Simona Perna, J. Clayton Fant, Lorenzo Lazzarini and Igor M. Villa	215
	Roman Villas of Lake Garda and the Occurrence of Coloured Marbles	
	in the Western Part of "Regio X Venetia et Histria" (Northern Italy)	
	Roberto Bugini, Luisa Folli and Elisabetta Roffia	231
	Roberto Dugini, Luisu Fotti una Lusubetta Rojjia	231
	Calcitic Marble from Thasos in the North Adriatic Basin:	
	Ravenna, Aquileia, and Milan	
	John J. Herrmann, Robert H. Tykot and Annewies van den Hoek	239
	Characterisation of White Mouble Objects from the Towns Lot A will	
	Characterisation of White Marble Objects from the Temple of Apollo	
	and the House of Augustus (Palatine Hill, Rome)	2.45
	Francesca Giustini, Mauro Brilli, Enrico Gallocchio and Patrizio Pensabene	247
	Study and Archeometric Analysis of the Marble Elements Found	
	in the Roman Theater at Aeclanum (Mirabella Eclano, Avellino - Italy)	
	Antonio Mesisca, Lorenzo Lazzarini, Stefano Cancelliere and Monica Salvadori	255

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

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

3.

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

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

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

ASMOSIA XI, INTERDISCIPLINARY STUDIES OF ANCIENT STONE, SPLIT 2018

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

THE WINGED VICTORY OF SAMOTHRACE: NEW DATA ON THE DIFFERENT MARBLES USED FOR THE MONUMENT FROM THE SANCTUARY OF THE GREAT GODS

Annie Blanc¹, Philippe Blanc² and Ludovic Laugier³

¹ Paris, France (philippe.blanc64@sfr.fr)

² Sorbonne Universités, UPMC, UMR 9173, iSTeP., Paris, France (philippe.blanc@upmc.fr)

³ Musée du Louvre, département des Antiquités grecques, étrusques et romaines, Paris, France (ludovic.laugier@louvre.fr)

Abstract

The Winged Victory of Samothrace has long been recognized as a masterpiece of Hellenistic art. Composed of a base in gray marble and a statue in white marble, made of several blocks sculpted separately and assembled, it was entirely restored in 2013-2014. It had been previously thought that the monument might have been sculpted from Proconnesian or Pentelic marble, but laboratory analysis by Yannis Maniatis proved that a sample from a feather housed in the museum of Samothrace was Parian. During its conservation in 2013-14 and at the request of the Louvre, the different marbles constituting the monument were analyzed to confirm recent hypotheses and to get a more complete set of precise information. Fifteen samples were taken and complementary methods were used so that the different results could be compared and cross-checked: measurement of the MGS, analyses of the stable isotopes of the marble, petrography, and cathodoluminescence.

Keywords

Paros marble, Hellenistic sculpture, Winged Victory of Samothrace

Previous work

The monumental Winged Victory of Samothrace displayed on the Daru Staircase in the Louvre is composed of a base, a plinth made of six blocks and the anterior part of a warship, made of seventeen blocks, all in gray marble with pinkish-white veins, weighing twenty-seven tons, and a statue made from seven principal white marble blocks sculpted separately and then assembled, weighing almost two tons (Fig. 1). It was previously thought that the monument might have been sculpted from Proconnesian or Pentelic marble, but today it is generally agreed that the Winged Victory is in Parian marble and the boat that serves as its base is in marble from Lartos on Rhodes.

Before discussing the analyses carried out in 2013-14, during the conservation of the monument, it is useful to refer to previous studies and first to the very first although practically unknown study of 1951 when, at the initiative of Jean Charbonneaux, mineralogical tests were carried out by Madeleine Deudon at the Office de Documentation des Monuments Français at the Palais de Chaillot. The parts of the monument tested included fragments of the boat, its plinth, a feather from the Winged Victory (Fig. 2), and a fragment of the inscription considered at the time to be the artist's signature. In addition, Jean Charbonneaux also provided a sample from a fragment of the ship found in Samothrace, in the theater of the sanctuary, just below the Winged Victory's precinct, which he acquired in July 1950 when working with Karl Lehman, director of the American mission on the island. At that time Charbonneaux also discovered the right hand of the statue. The results of the tests were very limited: they revealed that the fragments of the boat conserved in Paris and Samothrace were sculpted from the same marble, as was the plinth of the boat and the inscription; the feather, however, was made of different marble. It is interesting to note that these results are exactly the same as those we were to obtain today from thin-section analysis, especially with regard to the particular structure of the Lartos marble crystals.

Other tests were subsequently carried out, all providing additional information. In 1997, at the request of Ira Mark, under the supervision of Professor Scott Pike, four fragments of the plinth of the statue discovered in 1983 at Samothrace and for a time associated with the Winged Victory were analyzed, and these results were compared with those of tests made on a fragment taken from a break in the lower block of the statue at the Louvre. The results demonstrated that the Samothrace fragments were not sculpted from the same type of marble as the Winged Victory and therefore did not form part of the statue. As for the Louvre fragment, the identification of the marble remained open; in the 1990s literature, it was thought to be either Asia Minor marble or Parian marble.

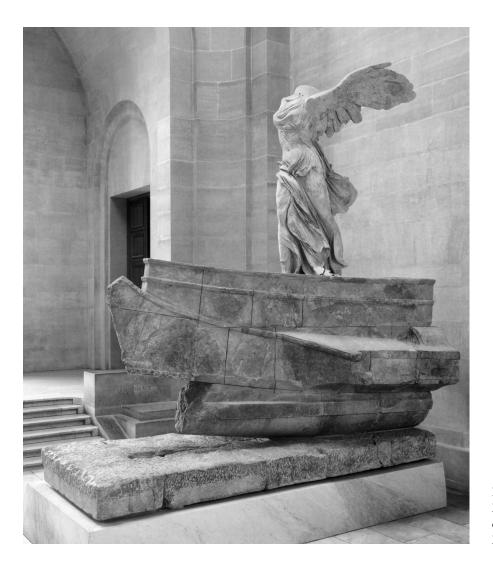


Fig. 1. Monument of the Winged Victory of Samothrace, circa 190-150 BC, Musée du Louvre

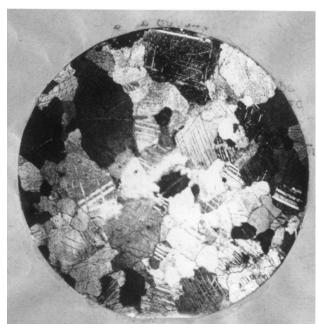


Fig. 2. Sample of marble from Paros examined by the Office de Documentation des Monuments Français, Palais de Chaillot, 1951

In 2008, on the initiative of Bonna Wescoat and Dimitris Matsas and under the direction of Professor Yanis Maniatis, conclusive multi-method laboratory analyses were carried out on fragments of the boat and on a feather that most probably belonged to the monument, all conserved in the Archaeological Museum of Samothrace. It was clearly established that the boat was made of Lartos marble and the feather of Parian marble from the Chorodaki-Lakkoi quarry¹.

New studies

In 2013–14, at the request of the Louvre, Annie and Philippe Blanc again analyzed the marble constituting the monument. Samples were taken from the bottom of the attachment holes made during the nineteenth-century restorations, and from breaks in the marble; in this way, no fragments from the original surface of the work were

¹ MANIATIS, TAMBAKOPOULOS, DOTSIKA 2012, 263-278.

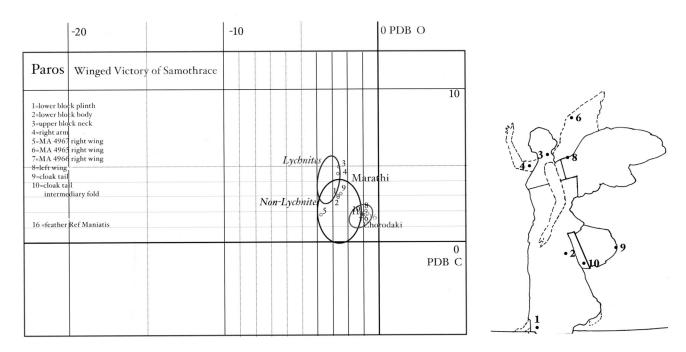


Fig. 3. Results of the isotopic analyses of the different marbles used for the Winged Victory and where the samples were taken from



Fig. 4. Sample of Parian marble taken from the lower block of the Nike's body, MGS: 2, 4 mm

removed. It was decided to test a block from the pedestal of the base (S4, 5, and 6), a block from the boat (prow: C6), as well as all the blocks of the statue. Complementary methods were used so that the different results could be compared and cross-checked: measurement of maximum grain size (MGS), analyses of the stable isotopes of the marble², petrography, and cathodoluminescence (Fig. 3 and 4).

The results confirmed that the boat and its plinth were both sculpted in Lartos marble from the island of

Rhodes. The statue on the other hand is entirely in Parian marble. An interesting fact that emerged from these results was that the blocks of the statue — the body, the wings, and the drapery — do not all seem to come from the same quarries on Paros. The right arm and the block constituting the upper part of the body (which originally included the upper torso and head) are all sculpted from the most beautiful marble to be found on the island, indeed the most beautiful marble in the Greek world: the famous Lychnites marble from the Grotto of the Nymphs and Pan or the Northern Nymphs quarries at Marathi. The large block forming the lower part of the body is in a Parian marble known as "non-Lychnites"³, a variety from different areas in the same quarries at Marathi⁴. The same marble was used for the rear part of the cloak and for the fragment from the lower part of the right wing. The left wing, two fragments of the upper part of right wing, and the intermediary fold between the body and the rear part of the cloak are in Parian marble from the quarries of Chorodaki-Lakkoi⁵.

It seems then that the artist used different types of Parian marble for the various parts of the statue, which were sculpted separately and then assembled. How can

² GORGONI, LAZZARINI, PALLANTE 2002. See also ATTANASIO, BRILLI, OGLE 2006.

The lower block of the Nike's body is the larger one, 1.82 m high: two samples have been taken, from the lower and the upper part to double check for possible result variations and to make sure the determination of the Paros marble is accurate.

⁴ MANIATIS, POLYKRETI 2000.

⁵ SCHILARDI 2000.

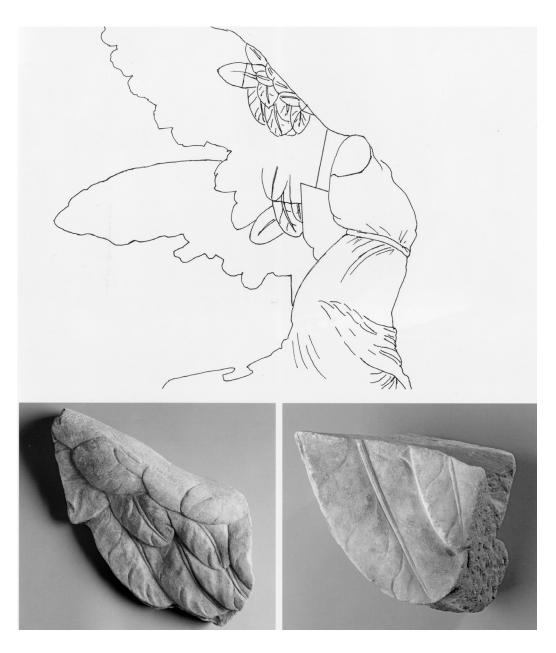


Fig. 5. Two fragments of the left wing, Marathi "Non Lychnitès and Chorodaki-Lakkoi. The upper fragment has been carved separately

these differences be interpreted? It is important to remember that the work was painted, or at least part of it was. A blue band at the lower part of the himation, painted with Egyptian blue and invisible today has been revealed by infrared luminescence (visible-induced luminescence imaging), and traces of a pigment made partly of Egyptian blue were found on the wings, thanks to the collaboration of Sandrine Pagès Camagna (Centre de Recherche et de Restauration des Musées de France) and Giovanni Verri (Courtauld Institut, London)⁶. Originally, then, the difference between the Lychnites marble of the bust and the colder hue of the Lakkoi marble used for the wings was probably less obvious that one might at first suppose. Moreover, the quarries in question were not

a long way from each other. We should also emphasize that the differences between the two Parian marbles are quite small. Still, we can propose possible hypotheses: the artist used only the best— the most translucent—Parian marble, for the flesh of the Winged Victory on the upper torso, head, and right arm, and most probably for the left arm, which has not survived, whereas he would probably have considered the excellent "non-Lychnites" marble as of sufficiently high quality for the drapery.

The wings are mainly in Lakkoi marble. A fragment from the bottom of the right wing seems, however, to have been sculpted in "non-Lychnites" rather than Lakkoi marble. Was this wing made in two pieces (Fig. 5)? The lower part of one of the fragments from the upper part of the wing is smooth, as though it had been prepared to be attached to another piece; the observation might back up this working hypothesis. The feather from

⁶ See HAMIAUX, LAUGIER, MARTINEZ 2014, p. 97-99.

the Samothrace museum analyzed by Professor Maniatis is in Lakkoi marble. Prof. Bonna Wescoat has attributed it to the right wing, as the fragment's curved shape seems to suggest. The fact that the right wing is probably made of two types of Parian marble allows this proposition.

The rear part of the cloak is in Parian "non-Lychnites" marble, whereas the intermediary fold joining the cloak to the body of the statue is in Parian Lakkoi marble (Fig. 5). We should beware of over-interpreting this result: Lakkoi is used for other blocks of the statue. Here, the nature of the marble does not explain the changes and repairs made by the artist, or indeed any alteration made at a later date.

We could also comment on the fragment with a dedication or a signature: as Madeleine Deudon well observed in 1952, it seems to made of Lartian marble, as is the base of the monument. Still, it doesn't join the base anywhere. Instead it ought to be considered a fragment of a small base for a statuette, as its scale and the remains of an insertion slot at the top clearly suggest.

Conclusions

As a result of the 2013–14 restoration, the different kinds of marble used in the creation of the monument the Winged Victory of Samothrace seem to have been identified in their diversity, which makes it possible to cautiously formulate hypotheses about their use in the statue itself.

BIBLIOGRAPHY

- ATTANASIO D., BRILLI M., OGLE N. 2006: The Isotopic Signature of Classical Marbles, L'Erma di Bretschneider.
- GORGONI C., LAZZARINI L., PALLANTE P., TURI B. 2002: "An updated and detailed mineropetrographic and C O stable isotopic reference database for the main Mediterranean marbles used in antiquity", in ASMOSIA V., 115-131.
- HAMIAUX M., LAUGIER L., MARTINEZ J.-L. 2014: The Winged Victory of Samothrace.
- MANIATIS Y., POLYKRETI K. 2000: "The characterisation and discrimination of Paria marble in the Aegean region", in *Paria Lithos*, 575-584.
- MANIATIS Y., TAMBAKOPOULOS D., DOTSIKA E., WESCOAT B. D., MATSAS D. 2012: "The Sanctuary of the Great Gods on Samothrace, Greece: an extended marble provenance study", in ASMOSIA IX, 263-278.
- SCHILARDI D. U. 2000: "Observations on the quarries of Spilies, Lakkoi and Thapsana on Paros", in *Paria lithos*, 35-59.