

ARCHEOLOGIA E CALCOLATORI

CNR – DIPARTIMENTO SCIENZE UMANE E SOCIALI, PATRIMONIO CULTURALE

ISTITUTO DI STUDI SUL MEDITERRANEO ANTICO

Rivista annuale open access e peer reviewed
fondata da MAURO CRISTOFANI e RICCARDO FRANCOVICH

Comitato Scientifico: Giovanni Azzena, John Boardman, Robin B. Boast, Francisco Burillo Mozota, Christopher Carr, Martin O.H. Carver, Francesco D'Andria, François Djindjian, James E. Doran, Salvatore Garraffo, Filippo Giudice, Antonio Gottarelli, Maria Pia Guermandi, Anne-Marie Guimier-Sorbets, Ian Hodder, F. Roy Hodson, Donna C. Kurtz, Adriano Maggiani, Daniele Manacorda, Paola Moscati, Tito Orlandi, Clive R. Orton, Maria Cecilia Parra, Francesco Roncalli, Grazia Semeraro, Paolo Sommella, Gianluca Tagliamonte, Marco Valenti

Direttore responsabile: Paola Moscati

Redazione: Claudio Barchesi, Francesca Cantone, Alessandra Caravale, Letizia Ceccarelli, Alessandra Piergrossi, Irene Rossi

Autorizzazione del presidente del Tribunale di Firenze n. 3894 del 6/11/1989

Indirizzo Redazione: Rivista «Archeologia e Calcolatori», CNR – ISMA, Area della Ricerca di Roma 1, Via Salaria Km 29,300, 00015 Monterotondo Stazione (RM)
Tel. +39.06.90672670 – Fax +39.06.90672818
E-mail: redazioneAC@isma.cnr.it
<http://www.archcalc.cnr.it/>

Edizione e distribuzione: Edizioni ALL'INSEGNA DEL GIGLIO s.a.s.
Via del Termine 36, 50019 Sesto Fiorentino (FI)
Tel. +39.055.8450216 – Fax +39.055.8453188
E-mail: redazione@insegnadelgiglio.it – ordini@insegnadelgiglio.it
<https://www.insegnadelgiglio.it/>

THE ARCHEOLAB PROJECT
IN THE DOCLEA VALLEY, MONTENEGRO
(CAMPAIGN 2017)

ARCHAEOLOGY, TECHNOLOGIES
AND FUTURE PERSPECTIVES

edited by
Lucia Alberti

ARCHEOLOGIA E CALCOLATORI
Supplemento 11, 2019

All'Insegna del Giglio

Funded by a grant from the Italian Ministry of Foreign Affairs and International Cooperation



Farnesina
Ministero degli Affari Esteri
e della Cooperazione Internazionale



*Ambasciata d' Italia
Podgorica*



 **Terna**

Realizzazione grafica della sovracoperta di Marcello Bellisario
Rivista «Archeologia e Calcolatori» (ISSN 1120-6861, e-ISSN 2385-1953)
Supplementi (ISSN 2385-202X, e-ISSN 2385-2038)
ISBN 978-88-7814-896-3, e-ISSN 978-88-7814-897-0
© 2019 – All’Insegna del Giglio s.a.s. – www.insegnadelgiglio.it
Firenze, giugno 2019
Stampa, Tecnografica Rossi.

I dati forniti dai sottoscrittori degli abbonamenti vengono utilizzati esclusivamente per l’invio della pubblicazione e non vengono ceduti a terzi per alcun motivo.

INDICE

LUCA ZELIOLI, <i>Forward</i>	7
LUCIA ALBERTI, <i>Introduction</i>	11
LUCIA ALBERTI, <i>Before the Romans: the historical and geographical framework of the Doclea valley</i>	19
SLAVKO BURZANOVIĆ, TATJANA KOPRIVICA, <i>The Roman city of Doclea as a focus for Italian scientists and Italian State authorities</i>	35
TATJANA KOPRIVICA, OLGA PELCER-VUJAČIĆ, <i>Historical and epigraphical survey of inscriptions from Doclea</i>	43
FRANCESCA COLOSI, PASQUALE MEROLA, PAOLA MOSCATI, <i>The urban planning of Doclea: remote sensing and topographical survey</i>	59
MARILENA COZZOLINO, VINCENZO GENTILE, <i>Ground Penetrating Radar survey</i>	77
CARLA SFAMENI, ANTONIO D'EREDITÀ, TATJANA KOPRIVICA, <i>The main public buildings of Doclea: archival, archaeological and architectural research</i>	85
LUCIA ALBERTI, ANTONIO D'EREDITÀ, <i>The future of the past: first perspectives for Doclea today</i>	105
PLATES	113

FORWARD

Perhaps to some readers this may come as a surprise, but when I think about history I also think of the present. This very moment is, after all, the outcome of our common past. Ancient Doclea is a case in point: it is part of that shared past, a component of the time that has shaped our 'now'.

The Roman city of Doclea was an important urban centre in the eastern Adriatic Roman province of Dalmatia (1st-3rd centuries AD) and the capital of the later province of Praevalitana (3rd-5th centuries AD). While taking its name from the Illyrian tribe (Docleati) inhabiting the area before its Romanization, the city – due to the strategic location, bordered on three sides by the Zeta, Morača and Širaliđa rivers and at a crossroads between the coast and the interior – soon became the second largest Roman municipality in the region (receiving the status of *municipium* during the Flavian age).

Doclea had mighty walls and very important buildings: a triumphal arch, a classic *forum*, a huge bathing complex and various temples. By any standard, it can be considered a flourishing urban and administrative centre, especially during its time as provincial capital.

The city remained prosperous and glorious – until the Ostrogoths sacked it around 490 AD. It was further devastated by a massive earthquake in 518 AD. Though the community partially recovered, the following turbulent period of foreign invasions saw other peoples, including the Slavs then “newcomers” to the Balkans, ravaging the urban centre once more. Though gravely damaged, Doclea probably managed somehow to survive into Late Antiquity, as the dating of the remains of some churches, located in its eastern area, seems to suggest.

Certainly, the memory of the city greatness was never completely lost: in the early Middle Ages, one of the first Slavic states began to coalesce in the region, centring around the valley of the river Zeta, thus incorporating the site of Doclea. This new State was known as Duklĳia.

The memories of Doclea have been therefore passed on to modern Montenegro through the historical echo of a medieval Kingdom and the visible ruins from the Roman age. In a sense, we know enough to ensure we do not forget, but too little to truly remember: to date, in fact, the once thriving Roman city still keeps most of its past secret.

It can be somewhat discouraging to learn that the main archaeological campaigns focusing on Doclea took place as long ago as between the end of the 19th and the beginning of the 20th centuries. The first systematic archaeological explorations were managed by a Russian researcher, P.A. Rovinski, in 1890. In 1913, the Italian Piero Sticotti published the book *The Roman Town*

Doclea in Montenegro: as it is explained in the papers of this Supplement, that same study is still today one of the most important references for the archaeological site.

It may be even more upsetting – at least to our present ‘cultural’ conscience – to discover that right after World War II a railroad was cut through this important site, irretrievably removing many traces of our common historical heritage.

Today everything has changed.

Independent Montenegro is committed to rediscovering, protecting and valorising its cultural heritage. A new series of archaeological campaigns began after 2006. The Montenegrin Ministries of Science and of Culture have also been promoting a fruitful and important collaboration with the National Research Council of Italy (CNR), in a scientific effort supported by the Italian Ministry of Foreign Affairs and International Cooperation as well. The focus of this collaboration, since 2016, is precisely the ancient site of Doclea, in recognition of its importance for Montenegrin history and cultural identity, as well as for the future of the Country.

In this framework, the ‘Joint Italian - Montenegrin Archaeological Laboratory’ initiative started its activities in 2017. An extensive survey at Doclea, using the most modern and non-invasive techniques (such as remote sensing, electromagnetic methodology, ground penetrating radar, etc.), has been conducted by CNR, in cooperation with the Historical Institute of Montenegro (University of Montenegro). The results, described in this Supplement, have produced a detailed and extensive plan of hidden structures, which will be definitely valuable in promoting future excavations and projects of valorisation.

Doclea indeed remains the most significant Roman site in Montenegro, located only a few kilometres from the capital city of Podgorica. In a country that embraces sustainable tourism as a key enabler for economic development, to protect and enhance this historical site is crucial not only for scientific purposes: undeniably, the success of a tourist destination is also increasingly linked to what it offers culturally.

I am therefore particularly glad that the collaboration involving CNR is continuing and even being enhanced. The Italian Ministry of Foreign Affairs and International Cooperation has recently decided to finance a new CNR - Historical Institute of Montenegro project, titled ‘*The Future of the Past: study and enhancement of ancient Doclea, Montenegro*’, identifying it as among the Great Relevance Projects under the Bilateral Protocol on scientific cooperation entered into in 2018.

The objective, as explained in the last contribution of this Supplement, is the design of a sustainable plan for ‘re-launching’ the site, both from the scientific point of view and as a tool for socio-cultural and economic growth. The idea is to create a future *ecomuseum* linking the archaeological heritage

to the surrounding territory and its local community. The residents would be involved in protecting the site and would benefit as well from the economic development triggered by, hopefully, increasing numbers of visitors.

I strongly believe that this new joint project can prove to be a turning point in fully rediscovering and protecting the Doclea chapter of our shared history; at the same time, it offers a possible contribution to shaping better cultural and economic opportunities for future generations. The project, in other words, can demonstrate that by today preserving and valorising the common heritage of the past, we can also foster a promising, credible ‘tomorrow’.

LUCA ZELIOLI

Ambassador of Italy to Montenegro

INTRODUCTION

1. THE PROJECT

The National Research Council of Italy (CNR), under the aegis of the International Relations Office, has started in the last years a productive collaboration with the Ministry of Science and the Ministry of Culture of Montenegro on the broad topic of the Montenegrin cultural heritage.

The first specific scientific agreement between CNR and the Ministry of Science of Montenegro was signed in 2014, and since then a series of bilateral activities have started. In Cultural Heritage studies, in particular, two bilateral projects have been conducted with the Historical Institute of Montenegro-University of Montenegro (HIM-UoM). Two CNR Institutes were involved: the Institute for Technologies Applied to Cultural Heritage (CNR-ITABC) – that signed a Memorandum of Understanding with the Ministry of Culture of Montenegro in 2016 – and the Institute for Ancient Mediterranean Studies (CNR-ISMA) – that started a Joint Archaeological Laboratory with HIM-UoM in 2017 (ALBERTI, SFAMENI 2015, 2017; ALBERTI, KOPRIVICA 2017). Both of these CNR Institutes were recently merged in the newly created CNR Institute for Cultural Heritage Sciences (Istituto di Scienze del Patrimonio Culturale, CNR-ISPC).

The first step of our collaboration has been a better knowledge of the Montenegrin Cultural Heritage, in order to strengthen the scientific relation between the two countries and the two scientific communities. In agreement with the Montenegrin Institutions, the Roman city of Doclea, located only few kilometres from the capital Podgorica, has been chosen as the scientific arena of this new collaboration, in view of its importance for the Montenegrin history and cultural identity. Doclea has been in fact since 2012 the first site in the priority list for intervention drawn up by Montenegro (RCCTFCS 2014).

Doclea, investigated at the end of the 19th century, has seen excavation activities also during the 20th century, conducted by international and local teams, as we will examine in detail later (BURZANOVIĆ, KOPRIVICA this volume). The work has contributed to bring to light some sectors of the city, both Roman and medieval (MUNRO *et al.* 1896; STICOTTI 1913; RINALDI TUFFI, BARALDI, PELOSO 2010; RINALDI TUFFI 2012; KOPRIVICA 2013, 2016. See also the journal NOVA ANTIČKA DUKLJA/NEW ANTIQUE DOCLEA 2010 on).

Doclea, the second-largest city in the province of Roman Dalmatia, was built within the lowland stretching between the Zeta river, the Morača river and the Širalijska, and it was named after the Illyrian tribe Docleati. Doclea

was a *municipium* created in the Flavian period, when the main monuments were built: a square-shaped *forum*, buildings of different sizes, *tabernae* and an aisled *basilica*, the Capitol temple, the temple of the goddess Roma and the temple of Diana, the two Flavian baths. Less known are the private quarters: only a private dwelling with more than twenty rooms around a courtyard, a bath-suite and a little temple have been excavated. The East Goths ravaged the city in 489 and an earthquake damaged it in 518. The city was destroyed again by Avars and Slavs in 609.

Doclea had indeed an important Late antique phase, represented by three churches, one with three naves, another perhaps with a basilical plan and a third with a cruciform plan. As for dating the later existence of the city, some scientists relate the Cruciform church to the 9th century: for this reason, probably Doclea continued its existence for longer than two centuries after the ravage and devastation in the early 7th century.

Even though the site is of great interest for the Montenegrin community, a more complete project of analysis and enhancement is still required. For this reason, one of the goals of our common work is the reappraisal of the scientific activities already carried out on the site, in order to achieve a better knowledge of its history and development by the application of new methodologies of analysis and new technologies of investigation. Another primary target is the enhancement of the site, for a better promotion of its touristic enjoyment and cultural use.

The joint Italian and Montenegrin team started its activities in 2017 in the framework of the so-called 'Joint Archaeological Laboratories', an initiative designed to fund interdisciplinary research projects to be carried out by Italian and foreign researchers in co-operation by sharing their individual skills and research facilities (ALBERTI, KOPRIVICA 2017; ALBERTI *et al.* 2018). The ArcheoLab Italia Montenegro initiative is carried out under the patronage of the Ministry of Culture of Montenegro and through funds awarded by the National Research Council of Italy (2017-2018), the Ministry of Foreign Affairs and International Cooperation (MAECI) (2017-2018) and the society Terna Crna Gora d.o.o. (2017-2018).

While we were writing this introduction, we had the important and gratifying news that our project, under the title 'The Future of the Past: study and enhancement of ancient Doclea, Montenegro' will be financed in 2018-2020 as one of the Great Relevance Projects of the MAECI, giving to all of us thereby fresh motivation, perspectives and encouragement¹.

¹ https://www.esteri.it/mae/it/politica_estera/cooperscientificatecnologica/programmiesecutivi/accordi_programmi_culturali_tecnologici.html.

2. GOALS AND METHODOLOGY

The project has as its primary goal the collection of all the historical, archaeological and technological data about Doclea and the surrounding valley, in order to achieve a better knowledge not only of the city, but also of the surrounding landscape, still partially unknown after more than a century of research. Still missing or but little known are, in fact, the Roman private habitation quarters, the medieval settlement and the pre-Roman occupation of the valley, for which a few Bronze Age and Illyrian finds are reported but not fully published. We do not know yet in which historical, social and economic milieu Doclea was originally founded and what are the reasons of its limited – or at least scarcely known – development.

Following on from the period of the first excavations and discoveries between the end of the 19th and the first twenty years of the 20th century (MUNRO *et al.* 1896; ROVINSKI 1909; STICOTTI 1913), an important step in the 1960s was the discovery and excavations of the necropoleis by the Serbian Academy of Sciences and Arts, actually Archaeological Institute of Belgrade (CERMANOVIĆ-KUZMANOVIĆ, SREJOVIĆ, VELIMIROVIĆ-ŽIŽIĆ 1975). In the following decades, though, the activities were reduced to a few excavations conducted by the Centre for Conservation and Archaeology of Montenegro, whose results and findings are kept in the archive, but remain largely unknown. More recently the Centre restarted research activities, whose outcomes are published in *NOVA ANTIČKA DUKLJA/NEW ANTIQUE DOCLEA* (2010-2017). In particular, some of the new excavations opened in Doclea by the Centre in the last two years were identified using the results of our geophysical prospections (COZZOLINO in this volume). Since 2017 other excavation activities as well are in progress under the aegis of the Balkan Heritage Field School (<https://www.bhfieldschool.org/>): the team is digging in the area of the Capitol temple (<https://www.bhfieldschool.org/program/roman-dig-doclea-montenegro>).

The present project, remaining cognisant of what has been done and what is in progress, employs a non-invasive multidisciplinary approach, in which different expertises are employed and innovative technologies and methodologies are tested, as is usual in the more professional and contemporary interdisciplinary projects. Different approaches drawn from history, archaeology and topography, and involving remote sensing, geophysics prospections, informatics, architecture, all conducted at different levels and scales of analysis, are starting to be the norm in many Mediterranean projects to do with cultural heritage analysis and enhancement, especially when dealing with cultural and archaeological landscapes. It is so too for Doclea (CULLOTTA, BARBERA 2011; BARATTI 2012; AMATO *et al.* 2016). We have proceeded from the archival and bibliographical collection of all data kept in numerous European museums, to remote sensing analysis by satellite, aerial

and drone images, and thence to archaeological survey, geophysics prospections and 3D reconstruction. Activities are still very much in progress. We define our methodological approach as ‘top-bottom-top’, meaning that, after the existing literature investigation, we proceeded from aerial reconnaissance from on high, down to earth with the archaeological survey, and even deeper underground with geophysics, before returning up onto the ground surface with the activities of reconstruction and valorisation. Every action is performed with the strong collaboration of all the professionals involved, and in an atmosphere of continuous review and discussion.

For achieving these sorts of objectives, Doclea appears an ideal site: quite rapidly abandoned and not inhabited thereafter for centuries, and with few excavation activities conducted till now. Our first term goal is to acquire a better knowledge of the site, its actual extent and dimensions in time and space for the Roman and medieval periods. This is to be achieved through a re-composition of old and new data and the construction of an up-to-date digital map, a fundamental first-step for every future investigation.

The present collection of papers is a preliminary scientific account of the results we achieved in the first year of activity at Doclea (2017). The choice to publish them in a Supplement of the international journal *Archeologia e Calcolatori* was largely dictated by the goals of our multidisciplinary project, in which new technologies are being applied to cultural heritage in the course of a successful dialogue with the approaches inspired from the Humanities. The common objective is to improve our knowledge of such an important site for the Montenegrin cultural identity in a unique digital environment.

From an editorial point of view, the aim is to facilitate the reader’s comprehension. For this reason, author’s names and titles published originally in Cyrillic characters (as Russian and Slavic languages) have been transliterated in Latin characters. For old texts republished in recent years in Montenegrin, the first original edition has been used. This is so for ROVINSKI (1909), republished in 1994, and STICOTTI (1913), republished in Montenegrin in 1999. Until now, with the exception of CERMANOVIĆ-KUZMANOVIĆ, SREJOVIĆ, VELIMIROVIĆ-ŽIŽIĆ 1975 and KOPRIVICA 2016, the only monograph dedicated to Doclea is that of STICOTTI (1913): his plan of the city, after more than a century, is still on display on the site (Plate 1). With this publication of our first results, we intend to provide a new set of images, that could be of assistance for future research and for a better realisation of the site (Plates 2-4).

The aim of this Supplement is to give a preliminary picture of the first campaign of interventions held in 2017, even if the project continued to produce results during our later interventions on site. Given the strong interdisciplinary approach adopted, every contribution is at the same time interconnected/dependent upon from the others and independent, because generated by different but integrated competencies.

The volume is essentially divided into two sections: after a first archaeological paper dealing with earlier chronological phases, there is a section concerning historical and archival matters; a second section follows, in which mostly archaeological and technological activities are presented. The whole concludes with a paper on future perspectives.

The first paper (ALBERTI) is a preliminary overview of the approach to comprehending the territory of the valley and its history during the Bronze and Iron Ages, before the city foundation, in which recent Montenegrin approaches in archaeology are compared to the contemporary directions of the discipline in the Mediterranean, in which the topic of cultural identity is deeply significant. After a description of the landscape, made following a proto-historical phenomenological approach, the main pre-Roman finds are introduced, with special reference to the first results concerning communication routes.

The second article (BURZANOVIĆ and KOPRIVICA) is an elucidation of the framework of the Italian political and scientific involvement in the Balkans, with special reference to national research and interest in Doclea. Through the use of both published and unpublished archival documents, the beginning of the international interest on Doclea (mostly Russian, British and Italian) and the history of the first excavations there conducted is delineated.

An account on the epigraphic materials found in Doclea, both published and unpublished, is then presented (KOPRIVICA and PELCER-VUJAČIĆ). The paper documents the *status questionis* concerning the epigraphic materials coming from Doclea, on which studies started before any archaeological excavations, and sketches the future perspectives given by innovative projects of digitisation and reflections about problems of identity.

The fourth paper (COLOSI, MEROLA, and MOSCATI) deals with the reconstruction of the urban planning of Doclea, through the use of topographical and archaeological survey and innovative technologies of analysis, like remote sensing data and their photo-interpretation. This integrated methodology has permitted the comprehension and geo-referencing of monuments still visible even though excavated at the end of the 19th century, and the identification and positioning of new structures. The ultimate goal here is the construction of a GIS platform and so to make a contribution to the production of a new and improved urban plan. The new results achieved concern roads and *insulae*: these are compared with other Roman urban plans.

The fifth paper (COZZOLINO and GENTILE) is a first account of a long-term (and still in progress) ground-penetrating radar survey, with a focus on some of the results achieved in the public area of the city around the *forum* and the Capitol temple. The first geophysical map here shows not only hidden and previously completely unknown structures, but gives new information and interpretation for already known buildings.

Next comes a preliminary analysis on the history and development of some of the Doclea main public buildings (SFAMENI, D'EREDITÀ, and KOPRIVICA). The paper analyses in particular the *forum* and the *thermae* in the general context of Roman architecture, starting from the archival documentation concerning the Doclea excavations and making comparisons with other similar Roman buildings, especially those belonging to Adriatic contexts. Using advanced technologies in aero-photogrammetric data processing and a careful analysis of all the architectural elements, the elaboration of three-dimensional models was started.

We conclude with a first and very preliminary account on the future of Doclea, with the perspectives suggested and opportunities offered by open-air and ecomuseum projects as experienced in other sites, drafting the first basic principles of a complete development project we will produce in the next years for the Ministry of Culture of Montenegro (ALBERTI and D'EREDITÀ).

The distinctive quality of the present project, conducted jointly by CNR Institutes and HIM-UoM, is the planning of a series of medium and long-term activities, for the inserting of Doclea in the contemporary archaeological arena and in the international position it deserves. For the first time since its discovery, a multidisciplinary team is conducting an integrated and innovative project for the promotion and, in a sense, of the 're-discovery' of the site. We are looking at the past, with our eyes fixed firmly on the future, a future brought into being from scientific results (new knowledge, publications both academic and popular), but also one promoting touristic and economic improvements (new media disseminations, sustainable tourism, socio-cultural and economic growth).

LUCIA ALBERTI

Istituto di Studi sul Mediterraneo Antico
CNR – Roma
lucia.alberti@cnr.it

REFERENCES

- ALBERTI L., KOPRIVICA T. 2017, *Joint Archaeological Laboratory Italia Montenegro: The Doclea Valley*, «Archeologia e Calcolatori», 28.1, 309-312.
- ALBERTI L., KOPRIVICA T., BURZANOVIĆ S., COLOSI F., COZZOLINO M., D'EREDITÀ A., GENTILE V., MEROLA P., MOSCATI P., PELCER-VUJAČIĆ O., SFAMENI C. 2018, *Progetto Doclea, Montenegro: un'antica città romana da «ri-costruire»*, in V. PORCARI (ed.), *Acts of the XIV International Congress of Heritage's Rehabilitation «The Conservation of Artistic, Architectural, Archaeological and Landscape Heritage»* (CICOP 2018), Napoli, Luciano Editore, 1186-1200.
- ALBERTI L., SFAMENI C. 2015, *La collaborazione scientifica fra l'ISMA e l'Istituto Storico del Montenegro. Un primo risultato di DIPLOMAzia 2014*, «ISMAGazine», 2, 12-13.
- ALBERTI L., SFAMENI C. 2017, *Italia-Montenegro: da un progetto bilaterale a un Laboratorio Archeologico Congiunto*, «ISMAGazine», 4, 19-21.

- AMATO V., COZZOLINO M., DE BENEDITTIS G., DI PAOLA G., GENTILE V., GIORDANO C., MARINO P., ROSSKOPF C.M., VALENTE E. 2016, *An integrated quantitative approach to assess the archaeological heritage in highly anthropized areas: The case study of Aesernia (southern Italy)*, «ACTA IMECO - International Measurement Confederation», 5, 2, 33-43.
- BARATTI F. 2012, *Ecomusei, paesaggi e comunità. Esperienze, progetti e ricerche nel Salento*, Milano, Francoangeli.
- CERMANOVIĆ-KUZMANOVIĆ A., SREJOVIĆ D., VELIMIROVIĆ-ŽIŽIĆ O. 1975, *Antička Duklja, nekropole*, Cetinje, Obod.
- CULLOTTA S., BARBERA G. 2011, *Mapping traditional cultural landscapes in the Mediterranean area using a combined multidisciplinary approach: Method and application to Mount Etna (Sicily, Italy)*, «Landscape and Urban Planning», 100, 98-108.
- KOPRIVICA T. 2013, *Diaries entries and photographic documentation of J. A. R. Munro related to the archaeological exploration of Doclea (Montenegro) in 1893*, «Zograf», 37, 1-15.
- KOPRIVICA T. 2016, *Arhitektura kasnoantičke Duklje. Mogućnost rekonstrukcije [The Architecture of Late Antique Doclea. Possibilities of Reconstruction]*, Filozofski Fakultet u Beogradu [Faculty of Philosophy-Belgrade], PhD dissertation.
- MUNRO J.A.R., ANDERSON W.C.F., MILNE J.G., HAVERFIELD F. 1896, *On the Roman town Doclea in Montenegro*, «Archaeologia», 55, 1-60.
- NOVA ANTIČKA DUKLJA/NEW ANTIQUE DOCLEA 2010-2017 = RADOVIĆ D. (ed.), *Nova Antička Duklja/New Antique Doclea*, 1-7, Podgorica, Ju Muzeji I Galerije Podgorice.
- RCCTFCS (REGIONAL COOPERATION COUNCIL TASK FORCE ON CULTURE AND SOCIETY) 2014, *Priority Intervention List 2012: Montenegro, Ljubljana Process II: Rehabilitating our Common Heritage 2011-2014*, Podgorica.
- RINALDI TUFİ S. 2012, *Doclea, città romana del Montenegro*, in G. DE MARINIS, G.M. FABRINI, G. PACI, R. PERNA, M. SILVESTRINI (eds.), *I processi evolutivi della città in area adriatica*, BAR International Series 2419, Oxford, BAR Publishing, 477-490.
- RINALDI TUFİ S., BARATIN L., PELOSO D. 2010, *Valorizzazione del sito archeologico di Doclea, città romana in Montenegro*, «Bollettino di archeologia online», 1, 71-77.
- ROVINSKI P. 1909, *Černogorija v jejo prošlom i nastojašem*, *Geografija.-Istorija.-Etnografija.-Arheologija*, tom II, čast 4 [*Montenegro in the Past and Present, Geography-History-Ethnography-Archaeology*, vol. II, part 4], S. Peterburg (republished in Cetinje-Novı Sad 1994).
- STICOTTI P. 1913, *Die römische Stadt Doclea in Montenegro*, *Schriften der Balkankommission Antiquarische Abteilung Heft 6*, Wien, In Kommission bei A. Hölder.

BEFORE THE ROMANS: THE HISTORICAL AND GEOGRAPHICAL FRAMEWORK OF THE DOCLEA VALLEY

1. INTRODUCTION

Writing about the pre-Roman period of Montenegro appears not really feasible from a strictly methodological point of view, because the modern geo-political limits of the State of Montenegro do not correspond to the wider cultural areas of the past that encompassed much of the southern-western Balkans: especially in the pre-Roman period (MARKOVIĆ 1985; MIJOVIĆ 1987). In recent years several publications about Balkan archaeology have underlined the necessity of envisaging a geographical entity crossing modern frontiers and without modern boundaries. Consciously or not, they are proposing as the appropriate area for study the one which approximates to the older Yugoslav borders (GORI 2015; GORI, IVANOVA 2017; GIMATSIDIS *et al.* 2018). It is a matter of fact that archaeology, since its development as a discipline in the 19th century, has always been interconnected with modern and contemporary politics, which ‘used’ archaeology – sometimes intentionally, sometimes not – as a way to achieve political and cultural ends often related to the promotion of forms of nationalism or national identity. This attitude has been recently investigated, for example, for Greece, but also for other Mediterranean countries, with particular reference to the use made of the past by museums, where their collections act as instruments of ideology and politics (SOLOMON 2003; HAMILAKIS 2006; TASIĆ 2014).

Until very recently, the modern history of Montenegro likewise profoundly affected the development and management of archaeological research there. Some of the richest theoretical discussions in modern archaeology and anthropology, such as identity and ethnicity topics, were skirted around and passed over, probably because of the then political and social tensions existing concerning ethnicity. The exceptions are few and recent (GORI 2017, 2018; GORI, IVANOVA 2017). In today’s Montenegro, the need to bring out its specific cultural identity from among the former components of Yugoslavia (ANDRIJAŠEVIĆ, RASTODER 2006; MORRISON 2009) means also a growing interest in the history of the region from antiquity (see lastly CULTRARO 2013). This is being realized by an increase in scientific and cultural programs with foreign countries, especially those of Europe.

Today, Montenegro territory *in toto* very rarely represents the focus of any research, probably because the data – both published and unpublished – is split and scattered. It is extremely difficult to identify those cultural phenomena limited

only to this region: rather it appears as a sort of liminal area between the Illyrian area *strictu sensu* of Albania and the central northern Balkans (HAMMOND 1982; WILKES 1992; GIMATSIDIS, PIENIAZEK, MANGALOGU-VOTRUBA 2018).

Recently, following on from the so-called *transitional period* the country has experienced and after its independence achieved in 2006, Montenegro has undertaken an autonomous and thoughtful political attitude concerning its rich cultural heritage, increasingly opening itself to external collaborations and striving for integration in the network of Mediterranean scientific archaeological research programs (ALBERTI in press), from which the Balkans, with the sole exclusion of Greece, were partially isolated due to the historical events for much of the 20th century.

The Ministry of Culture of Montenegro and the related Institutions are rigorously analysing the possibility of changing laws and procedures, in order to improve the quality of research into and the management of Montenegrin cultural heritage. Today many factors exist that continue to affect and delay the enhancement and relaunch of ancient sites as Doclea. Among these may be counted: the lack here of a faculty dedicated to Cultural Heritage and archaeological methodologies, which in turn has prevented the development of younger generations of archaeologists, conservators and professionals on cultural heritage management; the plural involvement at the same site of different institutions (sundry centres of control dealing with cultural heritage and museums); and the scarcity of the considerable funds required, as indeed and unfortunately is happening at many archaeological sites in the Mediterranean countries. All these issues have produced real obstacles in the study and the maximizing of the opportunities presented by ancient sites such as Doclea and its territory. Montenegro is working hard, though, and on its way to perceptibly improving the situation and resolving these impediments.

2. SPACE AND TIME

From the geographical point of view, the territory we discuss is the valley in which the Roman city of Doclea is placed: an area of more than 200 hectares, occupying the northwestern sector of the wide Zeta plain in which the capital Podgorica is located (Fig. 1). The Roman walls of the city delimit a smaller area of about 25 hectares, almost a triangle, naturally delimited by three rivers. In this account on the pre-Roman period, we will briefly refer also to sites located at the borders above delineated and even beyond this limit, up to the Skadar Lake area, in order to better understand the dynamics and strategies in the habitation-patterns of the region.

The valley today probably is not so dissimilar to what the first researchers saw at the end of the 19th century (MUNRO *et al.* 1896). Fortunately, today as well it is not much occupied by dwellings or enterprises: few houses are

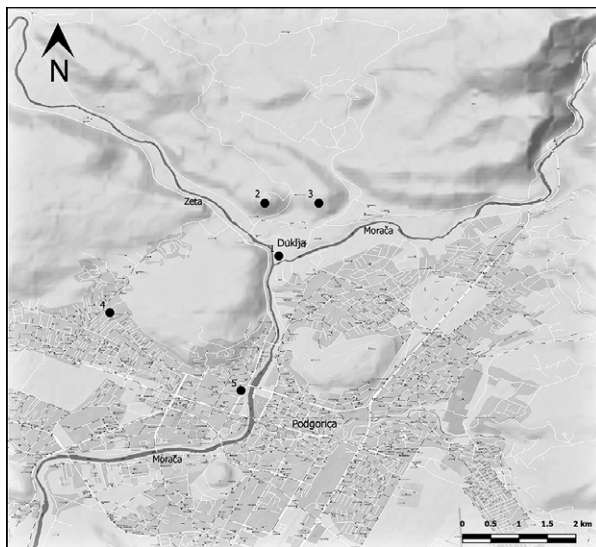


Fig. 1 – The Doclea valley: 1. Doclea; 2. Trijebač; 3. Doljanska Glavica; 4. The Copper-Age Gruda Boljevića tumulus; 5. The Middle Bronze Age Neškova Gruda tumulus.

being built on the fertile, if small, portions of land near the rivers and at the lowest slopes of the hills (where some commercial vineyards are established). Despite the great attention the site has enjoyed on the national TV and media, and despite the local people's interest in what they feel is one of the pillars of identity for the country, very few tourists visit Doclea.

From the chronological point of view, we are concerned with the later phases of prehistory, with special reference to the final part of the Late Bronze Age and the Iron Age – that is most of the 1st millennium BC, encompassing the so-called Illyrian period. We omit the earliest and richest phases of prehistory that are particularly interesting in the Balkans and that are the focus of some important research activities and publications (GARAŠANIN 1982; DELLA CASA 1996; PRIMAS 1996; MARKOVIĆ 2006; GORI, IVANOVA 2017), for these are less pertinent for the understanding of the development of the Doclea territory and the reasons for the foundation and development of the Roman city. Also the theoretical discussion and the historical definition of the Illyrians, their history, location, material culture and languages is passed over here (for an overview, though, see HARDING 1976 and see also GARAŠANIN 1976, 1982; WILKES 1992; DŽINO 2014; RIBICHINI in press).

This long pre-Roman period, lasting until the Augustan campaign in 30 BC, is still not well known at Doclea. The reasons are numerous and obvious:

no systematic archaeological surveys of the land have been undertaken, an aspect which contrasts with the discovery and very occasional publication of many very important finds, that often cannot be placed in a context. The varying quality in the accuracy of the literature: very often the available data, and especially on the prehistory of the valley, are thin indeed, even though many preliminary reports exist on excavations and fortuitous recoveries. For western scholars, further difficulties are represented by the languages of most of the publications of the last century, written in Serbian and Serbo-Croatian until the 1990s and in Montenegrin since 2007. Moreover, few of the publications even exist in western libraries.

For all these reasons, this paper presents a very general and preliminary picture of the area where, in the 1st century AD, Doclea was founded¹. One of our goals in the hoped-for continuation of the project is an intensive diachronic survey in the valley and the surrounding hills, in order to reconstruct a credible picture of the pre-Roman evidence as well. This will be backed by assembling old and new data, through archival and bibliographical research, and the application of the new technologies available to landscape archaeology.

3. THE LANDSCAPE

From the point of view of the researcher into proto-history, the analysis of the landscape, having in mind the settlement strategies of the involved communities, is one of the first steps in reconstructing the movements of the human groups settling the area and to identify in strategic and economic terms the points in which they settled. As is well-known, the human choice of a territory in pre-industrial times is linked to water availability, proximity to fertile lands and defensibility.

Following the phenomenological approach in archaeology (TILLEY 1994, 1996) and looking at the Doclea landscape with a prehistoric mind-set, we notice first of all that the almost triangular plain in which the city is located is very well protected by the Morača and Zeta rivers and the torrent of Širalija. It is also sheltered at the N and W by a series of low hills, the last spur of a higher chain of mountains. The Morača and Zeta rivers contribute significantly to the defensibility of the area: both of them have cut deep courses in the valley and carry a considerable amount of water even during the very hot summers that affect all the low plain around the capital city of Podgorica. The Zeta has the bigger quantity of water, whilst the Morača appears swifter,

¹ The information collected is the result of a friendly and invaluable collaboration with our Montenegrin colleagues, without whom the difficulties would be insuperable. In particular, I desire to warmly thank Dr Olga Pelcer-Vujačić for the invaluable and competent help in collecting and reading with me some hard-to-find Balkan bibliography and Igor Vujačić for his very kind help in explaining to me the not easily comprehended toponyms of the area.

because it receives the melted snow coming from the northern and eastern high mountains of inner Montenegro.

The northern part, where the Širalija torrent is today canalised, is the weakest: significantly the Roman wall of the city is here higher and reinforced by bastions. An important role in the plain's defence was played by the northern two hills of Trijebač and Doljanska Glavica, that enjoy a dominant position over the area.

The bedrock is a conglomerate, rich in pebbles rounded by the water action, a fluvial sediment covered by a thin stratum of humus, apparently only few centimetres thick. In spite of the oft-claimed fertility of the land, that indeed and especially after the winter rains appears covered by wild and edible herbs, it seems that farming is difficult, with the exception of the very high quality products of vineyard cultivation. The surrounding, quite barren hills have a karst subsoil, probably limestone, which is not good at retaining water; very few water springs exist, notwithstanding the rivers presence.

The geology of the area, which will be investigated in detail in the future, seems one of the reasons for the apparently relatively light exploitation of the land. It is used mostly for pastoralism, traditionally the major cornerstone of Montenegrin exploitation of the land both today and in the past, at least until the industrial revolution. One of the more intriguing features we noticed during our preliminary archaeological survey is the very scarce quantity of pottery fragments visible at the surface, even in the recently excavated sectors. This phenomenon requires more thought to be explained: it may have something to do with history of occupation of this spot in the Roman and earlier periods, still but vaguely comprehended. Broadly speaking, as stated above, all the wide zone at the northern borders of the Zeta plain, under the slopes of hills and mountains, is karst territory, with small portions of fertile land located near the rivers or in small plains surrounded by mountains.

Specific studies on geomorphology, environment, palaeoecology, vegetation, resources and subsistence backgrounds of the micro-region represented by the Doclea area are still missing. They too will all be the subject of future analyses.

4. ROUTES AND FINDS

An appreciation of the terrain of the wider area, stretching from the northern passages opened by the Morača and Zeta rivers up to the Skadar (or Skodar/Skoutari) Lake to the SE, is fundamental to understand the possible routes, both commercial and cultural, used by the communities that inhabited the region.

The confluence of the Morača and Zeta rivers marks the end of the Bjelopavlići (or Zeta) valley, one of the few flat and fertile areas of the country, even

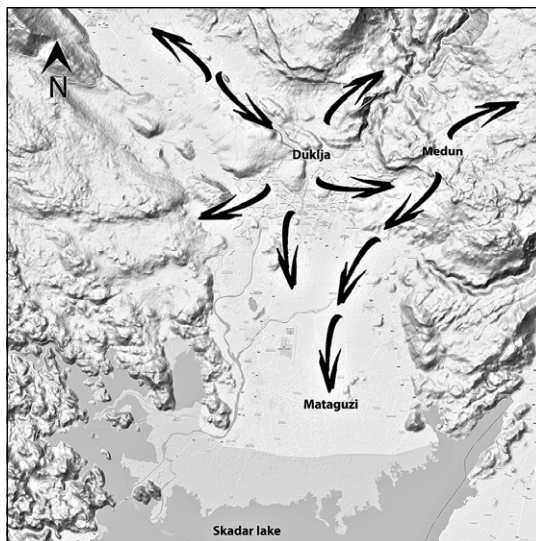


Fig. 2 – The Zeta plain with hypothetical ancient routes.

if narrow and restricted, leading northwards and hemmed in along its length by the very high mountains making up most of Montenegro. This passage seems to have been associated also in antiquity with important cultural and commercial exchanges (MARKOVIĆ 1985): the Balkan ‘amber route’ passed along it and very possibly it assisted nomadic pastoral movements of flocks and people that, through Montenegro, connected the northern and western Balkans with Albania and northern Greece (HAMMOND 1982; TASIĆ 2014). The Morača river has excavated a deep canyon, creating the narrow Rovca and Piperi valleys, with their slim and fertile portions of land. Although this specific geomorphology makes its crossing very difficult, it is feasible to suppose that the river could be crossed at many points, and not only in the southern part of the valley, where old traces of the Roman presence are referred to. Alongside its course, in fact, ran an important route for man and beast that led to the interior of northern and western Montenegro. Thanks to the river and the roads associated with the same, the Doclea valley becomes a nodal point, connecting the northern lands to the wide plain, and on up to the Skadar Lake and thence to the coast. To the NE, the valley runs along the slopes rising up and giving access to the high mountain-chains of Kuči, through which only a very few passes are available, and only during spring and summer, being closed by the snow during the very hard winters (Fig. 2).

The Doclea area represented therefore a key point for those pre-Roman communities, and probably also for later human groups, wishing to control

the passages from the northern and eastern mountainous area to the western and southern flatter zone, and on to the Skadar Lake and the Adriatic coast. Here an intensive maritime trade existed, as is well recorded in literary sources (ZDRAVKOVIĆ 2016), but less confirmed by finds for the Bronze Age, when the pattern of commercial exchange seems to assign to the eastern Adriatic a secondary role (TOMAS 2009).

Concerning the routes of communication, it is important to underline the possibility that in particular the Zeta river, characterized by a less impetuous flow than the Morača, could have been partially navigable through barges, at least for some sectors of its flow. Only an intensive archaeological survey on the traces left on the river borders can improve this state of knowledge.

Moreover, in an aerial photograph taken in 1942 during the World War II, a very clear trace going WE is detectable on either side of the Morača river, in an area then free from dwellings, but today occupied by many private houses. The trace, still visible in a modern satellite image, appears to be an extension of the *decumanus* beyond Doclea's walls. As with a number of other cases, it could represent an earlier road, later reused and straightened by the Romans (Fig. 3)². 19th-century travellers and archaeologists gave accounts about ancient roads running WE (from Naronā to Skodra), but their routes are difficult to locate, as is whether they crossed the city area or not (MUNRO *et al.* 1896; STICOTTI 1913). At the point where the *decumanus* encounters the city eastern walls, Sticotti placed an internal defensive tower, built to protect a supposed bridge (STICOTTI 1913; ŽIVANOVIĆ, STAMENKOVIĆ 2012). Beyond the Morača, where the supposed bridge led, he identified the remains of an aqueduct and of a building under a modern house (STICOTTI 1913). The fact that the road visible in the aerial photo continues the line of the *decumanus* makes more plausible the existence of a bridge at that point (a wooden, disassembled one?). More investigation is necessary to say if the bridge traversing the Morača existed also before the Romans, which would then mean that the *decumanus* was following the direction of an earlier road.

Despite being sited at a key point, at the moment only a few prehistoric and pre-Roman finds have been found inside the walls of the Roman city, even though some sections of the site have been excavated to some depth³. The reasons could be cultural and historical. Illyrian sites seem to be usually

² I thank the architect Elisa Fidenzi for having drawn my attention to this trace.

³ When this article was already in draft-form, some results of an archaeological excavation (conducted in the southern part of the city, near the Diana temple, by the Centre for Conservation and Archaeology of Montenegro) became available. Here, at a depth of about 80 cm, it seems that Late Bronze Age pottery fragments have been found. Also other rescue excavations have brought to light several Illyrian temples and some coins dated «to the reign of the Illyrian King Ballaios and Queen Teuta of the Ardiaei, a tribe who ruled in the mid-second century BC»: <https://archaeologynetwork.blogspot.com/2018/12/illyrian-temples-found-at-ancient.html?spref=f-b&m=1#rmHRUjUIel2eE0D1.97>.



Fig. 3 – Traces of an ancient road, being the continuation of the Doclea *decumanus* beyond the Morača river, as seen both in a 1942 aerial photograph of World War II and in a 2014 Google Earth satellite image (satellite WorldView-2, 29/08/2014).

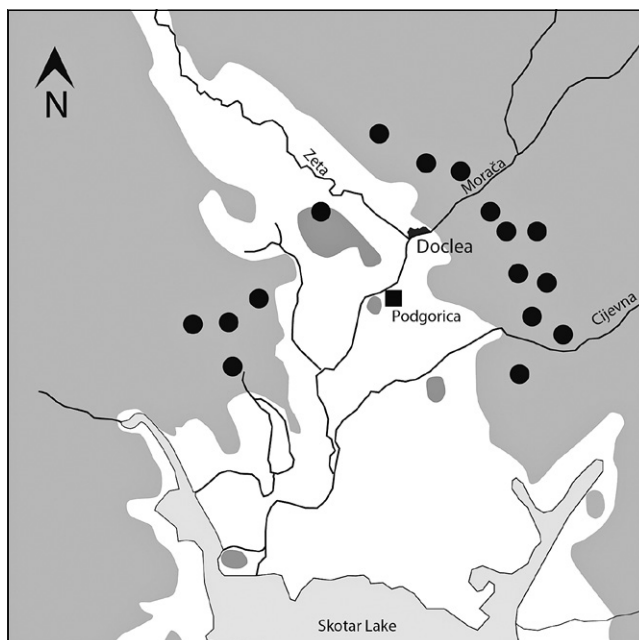


Fig. 4 – Gradinas in the Zeta plain (modified *after* DELLA CASA 1996, fig. 7).

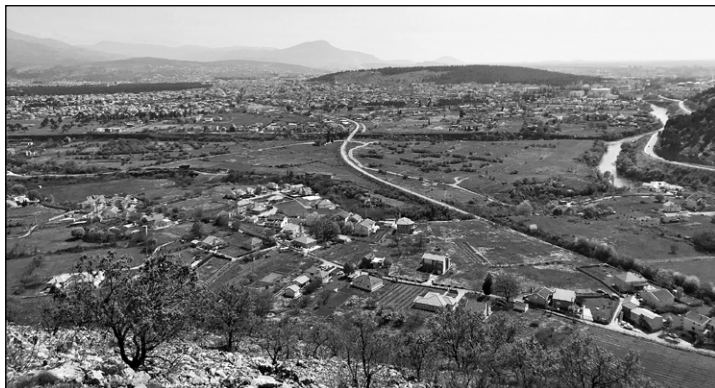


Fig. 5 – The view from the Trijebač gradina: from the N, toward the Skadar Lake (photograph by the author).

located on hills, in easily defensible and dominant positions, and not down on the plain. Immediately N of Doclea, in fact, the two low hills previously referred to have brought to light important traces of the pre-Roman period.

On the western low hill of Trijebač, at a high of 187 m above the sea level, a ‘gradina’ has been found. Gradinas are fortified settlements generally located on hills or in a dominant position on a plain, probably for defence or refuge. In this area they are usually dated to the Illyrian period, that is the 1st millennium BC, but as in other Balkan areas, they can be traced back to the Early Bronze Age too (GARAŠANIN 1982; WILKES 1992; MARKOVIĆ 2006; VUČINIĆ 2014). They do not have a specific and standardized layout, but follow the local terrain configuration; they are often characterized by monumental walls and big terraces, even if they do not seem to have a true urban structure (GARAŠANIN 1982). Even though we do not know either the precise chronology or the structural details for gradinas, the last published (if summary) account about their location around the Zeta plain indicates that they were disposed in a sort of arc running W to E, so that they established a degree of control of the territory and probably had a system of intra-communication exploiting their intervisibility (Fig. 4; DELLA CASA 1996).

The gradina in Trijebač had three terraces and enjoyed a very dominant position in the valley, controlling the road descending from the N through the Zeta plain to the Skadar Lake at the S, with a great range of visibility, especially in clear weather (Fig. 5). Unfortunately, the site is today built over with modern reinforced concrete, making it impossible to detect the original structures or other ancient traces, but its dominant position on the valley remains outstanding and was critical for its ancient use. Moreover, all the hills around Doclea have played a part in many conflicts, right up until World War

II, as military outposts, and so the ancient remains are profoundly disturbed. A survey done in 1956 describes the gradina as composed of a flat top with terraces at the NE, E and SE, on which were still detectable big blocks of the foundations. Many fragments of black and red pottery, badly baked, were found. In a hole surrounded by stones, in the NE sector of the top, a green stone axe with other stone and pottery fragments were retrieved (MLAKAR 1960).

The very similar hill of Doljanska Glavica, E of Trijebač, also holds a dominant position, controlling the Širalija stream, the Doclea valley, and the Drezga and Strganica plains. Here a gradina with two terraces was found, and prehistoric coarse and finer pottery fragments were collected (MLAKAR 1960; GARAŠANIN 1976). In addition, important Roman structures as well were excavated – a rectangular structure divided into two rooms and very fine Roman pottery, of better quality than that from Doclea, was found, indicating the possible existence of a Roman residence (villa?) (MLAKAR 1960). The local population also remembers the existence of a tumulus (maybe more than one), that at that moment we cannot identify.

N of the two hills lies even today a small portion of intensively cultivated plain, called Crnci, ‘black lands’, plausibly a toponym related to the humus’ colour and the consequent fertility of the terrain. From here another ancient mountain-path starts, used only in the good seasons.

Other pre-Roman terraces have been found on the left bank of the Zeta river, on the hill of Kabalj, NE of Trijebač. At Rogami, where the Morača enters the Podgorica plain, stone tools and handmade pottery fragments of a low level of technology (especially in their firing) have been recovered. The finds have been dated to the Early Bronze Age, indicating a very early occupation of the area.

Concerning the funerary aspects, many tumuli – the typical funerary remains of Balkan Bronze Age – are referred to at different points of the Zeta valley, both around Doclea and up to the Skadar Lake, but only a few of them are fully published. They are usually of earlier phases (DELLA CASA 1996; PRIMAS 1996; MARKOVIĆ 2006; SLADIĆ 2012). Adding to the few recently recorded remains nearby, in the Tološi suburban quarter of Podgorica, only 3 km SW from Doclea, the Gruda Boljevića tumulus dated to the late Copper age was located (GUŠTIN, PRELOZNIK 2015; SAVELJIĆ-BULATOVIĆ 2015a). In the very close-by suburb of Momišići, the Neškova Gruda tumulus, dated to the Middle Bronze Age, stands (SAVELJIĆ-BULATOVIĆ 2015b), testifying to human occupation and the possible presence of ancient settlements in the area. Numerous tumuli and other sites are recorded all over the Zeta plain as far as the Skadar Lake (MLAKAR 1960; DELLA CASA 1996).

In order to understand the importance that the Doclea valley had in the past for the wider interconnections and human movements through inner Montenegro, so linking the coast to the northern and southern Balkans, it is

important to mention at least two sites: Medun and Mataguži. Both set at the border of this vast plain, they have yielded important finds dated to the second half of the 1st millennium BC.

As one moves E towards the Skadar Lake, suddenly the plain is interrupted by high ground, where the important Illyrian site of Medun (or Medeon/Meteon) is located. In the ancient literature and recent bibliography alike, Medun is referred as the capital of the Illyrians and its name is linked to Polybius's reference to the defeat of Teuta (POLYBIUS II, 8, 8) queen of the Illyrians, during the Illyrian wars, caused by the Roman need to control Illyrian piracy more than for imperialistic purposes (229-219 BC) (HARRIS 1979; MARASCO 1986). The site was in the territory of the Labeates tribe, while Doclea was in the Docleates tribal lands.

The site occupies a small plain at a height of 540 m, hidden from the coast and the valley, being surrounded by crags and mountains. It is a well-defended place, perfect to see from, but not to be seen: it controls the Zeta plain from the W (Doclea) to the SE (Skadar Lake) and also the northern mountainous passages leading to the inner continental lands (Fig. 6). The acropolis of the site is located on a very small rocky top, again very well defended by natural cliffs and further by still visible walls built in the cyclopean technique. This last allows its construction to be put in the second half of the 4th century BC, arguably with the involvement of Greek artisans (Fig. 7; PRASCHNIKER, SCHÖBER 1919; GARAŠANIN 1976; RADUNOVIĆ 2013). But the very defensible position makes it likely that the site had been occupied also earlier. From Medun, very important routes to the interior run off to the E and N: most of them are accessible only during the spring/summer, after the snow's melting, and were probably used also for transhumance. Medun is also one of the already mentioned set of pre-Roman hillforts located around the Podgorica plain and forming a sort of defensive arc (Fig. 4; DELLA CASA 1996).

Regarding the period immediately before the Roman, very recently important Illyrian finds have been brought to light at Mataguži, in the Zeta plain, about 20 km S of Doclea, where an important fortification system with a tower (10×10 m and 2 m thick), massive defensive walls and a fortified entrance have been found. Archaeologists of the Centre for Conservation and Archaeology of Montenegro argue that Mataguži was the capital centre of the Illyrians in that area (<http://m.portalanalitika.me/clanak/308490/otkriveno-sjediste-ilirske-drzave>; ARCCA⁴). Mataguži is already well-known for the important research conducted in the 1980s, when an important Illyrian-Hellenistic cemetery was found in Donji Gostilj and numerous traces of the old settlement, both now under water and on land, were traced (VELIMIROVIĆ-ŽIŽIĆ,

⁴ ARCCA: Annual Report of Centre for Conservation and Archaeology.



Fig. 6 – The view from the Medun gradina towards the Zeta plain (photograph by the author).

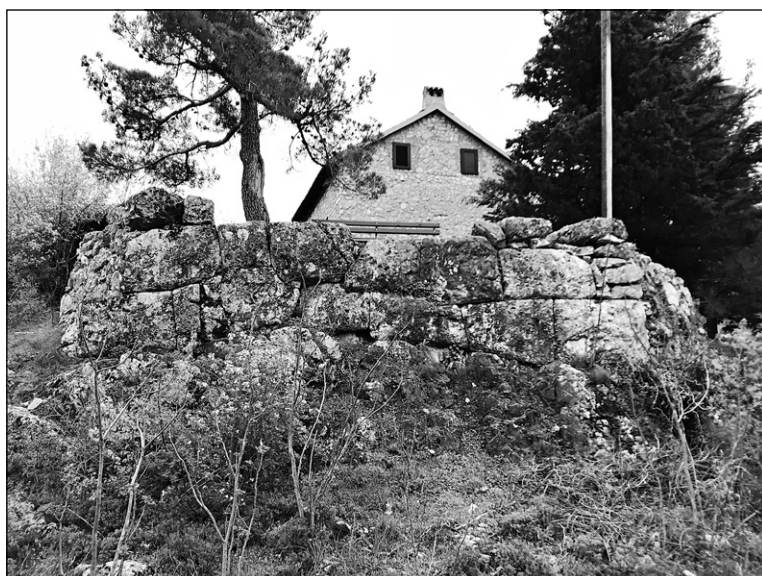


Fig. 7 – The remains of the cyclopean wall in Medun (photograph by the author).

PRAVILOVIĆ 1985). Both Medun and Mataguži are pivotal key points in the control of the vast expanse embracing Doclea, the Skadar Lake and the Adriatic coast. Indeed, all the land of the Zeta plain, up to the Skadar Lake, is covered by remains of gradinas and Bronze and Iron Ages tumuli, indicating a widespread occupation. Another element to be investigated in the future in this attempt to reconstruct the dynamics of the Doclea area before the period of Romanization is the construction of a detailed geomorphological map of the area, in particular to achieve a better knowledge of the shore-line and extent of the Skadar Lake in antiquity.

Concerning the important sites of Medun and Mataguži, where some phenomena have been ascribed to contacts with artisans coming from the Aegean, another aspect to be further analysed is what cultural and economic role the Greek element played in the interconnections between them and the different Illyrian tribes, in the few centuries preceding Romanization.

The fragmented state of the present body of data, the lack of knowledge surrounding so many of the finds that the valley has yielded, the uncertain chronology of the same finds, must make one highly cautious in assessing the reasons that brought the Romans to occupy this area with so impressive a city as Doclea. The need to control the perhaps disputed border-zone between the Docleates and Labeates tribes and to access one of the most important and easy routes connecting the inner Balkans with the eastern Adriatic coast – along which products and people were moving for centuries despite the hard conditions the weather and terrain imposed in its transportation – certainly all played an important part in the strategy adopted by the Romans regarding their occupation of the Doclea valley.

LUCIA ALBERTI

Istituto di Studi sul Mediterraneo Antico
CNR – Roma
lucia.alberti@cnr.it

REFERENCES

- ALBERTI L. (ed.) in press, *Interconnections in the Mediterranean through time: Montenegro and Italy. Proceedings of the Bilateral Round Table held at the University of Montenegro (Podgorica)*, Roma, CNR Edizioni.
- ANDRIJAŠEVIĆ Z.M., RASTODER Š. 2006, *The History of Montenegro. From Ancient Times to 2003*, Podgorica, Montenegro Diaspora Centre.
- BOARDMAN J., EDWARDS I., HAMMOND N., SOLLBERGER E. (eds.) 1982, *The Cambridge Ancient History*, vol. 3, part 1, Cambridge, Cambridge University Press.
- CULTRARO M. 2013, *L'Eneolitico in Italia centro-meridionale e Sicilia attraverso la prospettiva delle nuove ricerche nel mondo egeo-balcanico*, in D. COCCHI GENICK (ed.), *Cronologia assoluta e relativa dell'età del Rame in Italia (Preistoria e Protostoria I)*, Verona, QuiEdit, 213-232.

- DELLA CASA P. 1996, *Velika Gruda II. Die bronzzeitliche Nekropole Velika Gruda (Opš. Kotor Montenegro) – The Bronze Age necropolis Velika Gruda (Opš. Kotor, Montenegro)*, Bonn, Dr. Rudolf Habelt GmbH.
- DŽINO D. 2014, 'Illyrians' in ancient ethnographic discourse, «Dialogues d'histoire ancienne», 40, 2, 45-65.
- GARAŠANIN M. 1976, *Les Illyriens au Monténégro à la lumière des découvertes archéologiques*, in *Premier Colloque des Études Illyriennes*, «Iliria», 4, 319-325.
- GARAŠANIN M. 1982, *The Bronze Age in the Central Balkan Area*, in BOARDMAN et al. 1982, 163-186.
- GIMATSIDIS S., PIENIAZEK M., MANGALOGLU-VOTRUBA S. (eds.) 2018, *Archaeology across Frontiers and Borderlands. Fragmentation and Connectivity in the North Aegean and the Central Balkans from the Bronze Age to the Iron Age*, OREA 9, Wien, VÖAW.
- GORI M. 2015, *Along the Rivers and through the Mountains. A Revised Chrono-cultural Framework for the Southwestern Balkans during the Late 3rd and Early 2nd Millennium BCE*, Bonn, Verlag Dr. Rudolph Habelt GMBH.
- GORI M. 2017, *Illyrians across the Adriatic: A cultural history of an archaeological culture*, in A. DE FRANCESCO (ed.), *In Search of Pre-classical Antiquity. Rediscovering Ancient Peoples in Mediterranean Europe (19th and 20th c.)*, Leiden and Boston, Brill, 119-145.
- GORI M. 2018, *Bronze age and the embedded Macedonian question*, in GIMATSIDIS, PIENIAZEK, MANGALOGLU-VOTRUBA 2018, 391-409.
- GORI M., IVANOVA M. (eds.) 2017, *Balkan Dialogues. Negotiating Identity between Prehistory and the Present*, London and New York, Routledge.
- GUŠTIN M., PRELOZNIK A. 2015, *Gruda Boljevića. Knezevska humka kasnog bakarnog doba (Princely grave tumulus of the late Copper age)*, in SAVELJIĆ-BULATOVIĆ, GUŠTIN, HINČAK 2015, 15-41.
- HAMILAKIS Y. 2006, *The colonial, the national, and the local: Legacies of the 'Minoan' past*, in Y. HAMILAKIS, N. MOMIGLIANO (eds.), *Archaeology and European Modernity: Producing and Consuming the «Minoans»*, Creta Antica 7, Padova, Aldo Ausilio Editore-Bottega d'Erasmus, 145-162.
- HAMMOND N.G.L. 1982, *Illyris, Epirus and Macedonia in the Early Iron Age*, in BOARDMAN et al. 1982, 619-656.
- HARDING A.F. 1976, *Illyrians, Italians and Mycenaeans: Trans-Adriatic contacts during the Late Bronze age*, in *Premier Colloque des Études Illyriennes*, «Iliria», 4, 157-162.
- HARRIS W.V. 1979, *War and Imperialism in Republican Rome, 327-70 B.C.*, Oxford, Clarendon Press.
- MARASCO G. 1986, *Interessi commerciali e fattori politici nella condotta romana in Illiria (230-219 a.C.)*, «SCO», 36, 35-112.
- MARKOVIĆ Č. 1985, *The Neolithic of Montenegro*, Belgrade, University of Belgrade.
- MARKOVIĆ Č. 2006, *Arheologija Crne Gore*, Podgorica, CID.
- MIJOVIĆ P. 1987, *Pradavne i davne culture Crne Gore*, Titograd, Leksikografski zavod Crne Gore, Titograd.
- MLAKAR Š. 1960, *Neka terenska ispitivanja u okolini Duklje u Crnoj Gori*, «Starinar», 11, 215-224.
- MORRISON G. 2009, *Montenegro, a Modern History*, London, I.B. Tauris.
- MUNRO J.A.R., ANDERSON W.C.F., MILNE J.G., HAVERFIELD F. 1896, *On the Roman town Doclea in Montenegro*, «Archaeologia», 55, 1-60.
- PRASCHNIKER C., SCHOBER A. 1919, *Archäologische Forschungen in Albanien und Montenegro*, Wien, In Kommission bei A. Hölder.
- PRIMAS M. 1996, *Velika Gruda I. Hügelgräber des frühen 3. Jahrtausends v. Chr. Im Adriagebiet – Velika Gruda, Mala Gruda und ihr Kontext – Tumulus Burials of the Early 3rd Millennium BC in the Adriatic-Velika Gruda, Mala Gruda and their Context*, Bonn, In Kommission bei R. Habelt.

- RADUNOVIĆ M. 2013, *Illyrian city Meteon: Medun through times*, «Renome magazine», 3-7, 24-31.
- RIBICHINI S. in press, *Kadmos the Phoenician and the Illyrian landscape. Some recent mythological approaches*, in ALBERTI in press.
- SAVELJIĆ-BULATOVIĆ L. 2015a, *Gruda Boljevića. Geografski uvod i istorijat istraživanja (Introduction and history of research)*, in SAVELJIĆ-BULATOVIĆ, GUŠTIN, HINCAK 2015, 9-14.
- SAVELJIĆ-BULATOVIĆ L. 2015b, *Neškova Gruda – Humka Bronzanog doba*, in SAVELJIĆ-BULATOVIĆ, GUŠTIN, HINCAK 2015, 137-145.
- SAVELJIĆ-BULATOVIĆ L., GUŠTIN M., HINCAK Z. (eds.) 2015, *Podgorica, praistorijske humke i srednjovjekovne nekropole Gruda Boljevića*, Podgorica, Ju Muzeji I Galerije Podgorice.
- SLADIĆ M. 2012, *Praistorijski tumuli u Otilovićima kod Pljevalja*, «Ancient Times. Archaeology in Montenegro», 1, 59-101.
- SOLOMON E. 2003, *Constructing local identity through archaeological finds: The case of Knossos (Crete, Greece)*, «Museological Review», 10, 31-47.
- STICOTTI P. 1913, *Die römische Stadt Doclea in Montenegro*, Schriften der Balkankommission Antiquarische Abteilung Heft 6, Wien, In Kommission bei A. Hölder.
- TASIĆ N. 2014, *Some reflections on the migrations of Palaeo-Balkan peoples in pre-Roman times*, «Balcanica», 45, 15-23.
- TILLEY C. 1994, *A phenomenology of landscape: Places, paths, and monuments*, Oxford, Berg Publishers.
- TILLEY C. 1996, *The powers of rocks: Topography and monument construction on Bodmin Moor*, «World Archaeology», 28, 161-176.
- TOMAS H. 2009, *The world beyond the northern margin: The Bronze Age Aegean and the Adriatic Coast*, in W.A. PARKINSON, M.L. GALATY (eds.), *Archaic State Interaction: The Eastern Mediterranean in the Bronze Age*, Santa Fe, School for Advanced Research Press, 181-212.
- VELIMIROVIĆ-ŽIŽIĆ O., PRAVILOVIĆ M. 1985, *Mataguži, helenisticko i rimsko naselje*, «Arheoloski pregled», 26, 78-79.
- VUČINIĆ S. 2014, *Studije o antici u središnjoj Crne Gore*, Biblioteka Posebna izdanja 15, Podgorica.
- WILKES J.J. 1992, *The Illyrians*, Oxford, Blackwell Publishers.
- ZDRAVKOVIĆ P. 2016, *O pomorskoj trgovini na istočnom Jadranu u antici kroz istorijske izvore/A maritime trade on the eastern Adriatic coast in ancient times through historical sources*, «Nova Antička Duklja/New Antique Doclea», 7, 75-93.
- ŽIVANOVIĆ M., STAMENKOVIĆ A. 2012, *O gradskim bedemima antičke Dokleje/On city walls of ancient Doclea*, «Nova Antička Duklja/New Antique Doclea», 3, 115-145.

ABSTRACT

After some general considerations on recent approaches in Balkan archaeology, the Author makes a first attempt to describe the Doclea landscape, through the eyes of a proto-historian. Drawing upon the collection of the existing published data on the pre-Roman period, the valley's history before Romanization is set forth, with some preliminary observations on possible roads and passages, both commercial and cultural, used by the communities that inhabited the region.

THE ROMAN CITY OF DOCLEA AS A FOCUS FOR ITALIAN SCIENTISTS AND ITALIAN STATE AUTHORITIES

Starting in the late 19th century, Italy developed stronger political and commercial interests in the Balkans: Montenegro's location was considered an exceptionally important geopolitical one. In 1896, the marriage of the Prince of Naples, Vittorio Emanuele and the Princess Jelena Petrović Njegoš linked Italy and Montenegro. As a result, in the first decade of the 20th century Italy set about realizing a stronger economic expansion into Montenegro. From the ideological point of view, such policy found part of its justification in the long tradition of the Roman and later Venetian presence within the region.

As an important archaeological site, Doclea became the focus of the European scientific attention from the 1870s. That was due to the activities of two Italians, Lorenzo Perrod and Giovanni Battista de Rossi. The Italian Consul in Shkodra, Mr. Perrod had bought the so-called 'Podgorica Cup' that had been found in Doclea (DUMONT 1873, 71-73; LEVY 1963, 55). Later on, out of Perrod's collection of artefacts, the Cup was purchased by the Russian diplomat and collector A. Basilewsky; subsequently, it became the possession of the Russian Tsar Alexander III who presented it to the Hermitage Museum where it is still preserved (KRYZANOVSKAYA 1990, 143-155). The Old Testament scenes depicted on that artefact provoked the attention of a number of scientists: among them was de Rossi, who described the 'Podgorica Cup', analysed it and emphasised the significance of its discovery for the archaeology of Christianity (DE ROSSI 1874, 153-155; 1877, 77-85; FINNEY 1994, 284-286; NAGEL 2013, 165-198; ŽIVANOVIĆ 2015, 77-108).

The first systematic archaeological explorations of Doclea took place from 1890 to 1892, managed by P.A. Rovinski. This resulted in the discovery of the *basilica*, *thermae*, the temples of Roma and Diana and some housing units (ROVINSKI 1909, 20-69). The news about these explorations attracted the interests of the Italian Ministry of Foreign Affairs. In March 1891, Minister Antonio Di Rudini requested Felice Barnabei, the director of the National Museum of Rome/Baths of Diocletian to provide information about the characteristics and importance of the discovery. In his report, Barnabei wrote: «E l'impressione generale che ne ho avuta è questa, che il [...] prof. sembra essersi messo all'opera non abbastanza fornito di tutte quelle nozioni storiche, topografiche e archeologiche tecniche, che sarebbero state necessarie per condurla a buon fine, e soprattutto per rendere possibile al medesimo e agli altri di trarre risultati scientifici più o meno accertati dai ritrovamenti fatti» (KOPRIVICA 2017, 61).

In September 1892, the renowned Doclea-researcher from Trieste, Piero Sticotti, together with Luka Jelić, arrived in Montenegro. Their mission was but a part of a more extensive research into Montenegro and Albania under the auspices of the Archaeological and Epigraphic Seminar of the Vienna University. Sticotti also explored Doclea in 1902 and 1907. The results of his efforts produced the most comprehensive study on Doclea managed so far (STICOTTI 1913; Plate 1).

In 1893, the British archaeological mission in Doclea enriched the picture and produced a more complex representation of the site's greatness and significance. In the eastern part of the city, the team led by J.A.R. Munro discovered the late antique and the early medieval Christian churches – known today as Basilica A, Basilica B and the Cruciform church (MUNRO *et al.* 1896, 23-30; KOPRIVICA 2013, 1-15). The results of the British research increased the interest of the general scientific community in Doclea. The option of sending an exploration mission was considered in France as well. As a result, Paul Nicod and Armand Dayot visited Montenegro in 1892 and 1895 respectively (KOPRIVICA 2017, 62).

In 1900, the organization of an Italian mission was put before the Italian Government by Guido Cora, who had spent several days the previous year in exploring the Doclea remains (CORA 1901, 45-46; BURZANOVIĆ, KOPRIVICA 2011, 221-222). In his attempts to make the Montenegrin authorities interested in the project, he contacted their representative in Rome, Evgenije Popović and the Foreign Affairs Ministry's Secretary Slavo Ramadanović. He also talked to the Italian Prince Vittorio Emanuele and the Princess Elena. The Italian Prince, who was a passionate numismatist, visited the site for the first time in 1896 (KOPRIVICA 2017, 66). Despite his efforts, Cora was not successful in his plans. In 1901, the Education Minister Nunzio Nasi allocated insufficient funds for the exploration work in Doclea; as a result, the competent financial authorities refused to disburse them (BURZANOVIĆ, KOPRIVICA 2011, 221-222)¹. In early October 1901, the Italian archaeologist Roberto Paribeni stayed in Montenegro (SALMIERI 1986, 201; MUNZI 2008, 561). The Montenegrin Government permitted him to undertake explorations and they provided for him the support of local authorities (BURZANOVIĆ, KOPRIVICA 2011, 222-223). In addition to Doclea, Paribeni was reconnoitring the sites in Martinići, Spuž, Tuzi and Nikšić (PARIBENI 1903, 374-379; BALDACCINI 1991a, 827-833). But on the matter of possible Italian systematic explorations in Doclea, he demonstrated serious reservations (KOPRIVICA 2017, 63).

In 1902, from their funds allocated for archaeological explorations abroad (in Egypt, Tunisia and Crete) the Italian Government allocated a

¹ *Per gli scavi archeologici nel Montenegro*, «La Stampa» 17.8.1901, n. 227, 1.

modest amount of money for Montenegro as well². This act can be put down to the Italian Government's expectations, after the great success achieved by Federico Halbherr in exploring Crete, that archaeological work could be a positive help in their attempt to achieve Italian expansion within the Mediterranean region. The Ministry of Foreign Affairs started endorsing projects in areas where the Italian political and scientific interests overlapped (PETRICIOLI 1990). In 1902, the long-awaited announcement of an archaeological mission to Montenegro became fact, a part of the multidisciplinary scientific expedition arranged and led by the botanist and geographer Antonio Baldacci. The expedition was preceded by Baldacci's application dated June 1902, giving the brief agenda not only of the aforesaid mission, but also of Italian expansion within the region of the Eastern Adriatic shore. Among the mission's goals, local anthropological, folkloric and sociological research was listed, particularly related to the population in the border regions of Montenegro and Albania (BALDACCİ 1991b, 798; BURZANOVIĆ 2008, 73-74). Baldacci expected abundant archaeological findings from the period of Greek and Roman colonization and particularly discoveries concerning Roman trade, military stations and the remains of a road system. In the background of this «nostalgia for the antique», there was a transparent desire to renew the economic and military presence of Rome within the Balkans, as well as converting the Adriatic Sea into another *Mare Nostrum* (BALDACCİ 1991b, 797-805; BURZANOVIĆ 1997, 74). The mission was partly led by an archaeologist, professor Dante Vaglieri who was researching the Doclea ruins and the remains of a Roman aqueduct (Fig. 1). Vaglieri's inquiry did not, however, produce significant scientific results. The Italian scientific mission was present again in Montenegro in 1903 as well; however, due to the illness of professor Vaglieri, the archaeological explorations were not resumed (BURZANOVIĆ, KOPRIVICA 2011, 225-226).

With the exception of Sticotti's short visits (in 1902 and 1907), no new Italian archaeological excavation took place for one hundred years. At the eve of World War I, Doclea was in danger of devastation and being cut through by the Podgorica-Nikšić railway route that the Montenegrin Government planned to construct according to the French engineers' design. Concession for the construction project had been granted to the Italian company, the Bar Company (*Compagnia d'Antivari*) that, supported by its Government, had constructed a complex transport system which included the port of Bar, the Virpazar-Bar railroad, navigation on Skadar Lake, and the Marconi radio station (BURZANOVIĆ 2009, 26-40). The Italian engineer, Vincenzo Pasi put together, though, a different route so that the devastation of Doclea could be

² Atti parlamentari, Camera dei Deputati, Legislatura XXI-2ª sessione-discussioni-1ª tornata del 16 giugno 1902, 2965-2966 (<https://storia.camera.it/regno/lavori/leg21/sed271.pdf>).

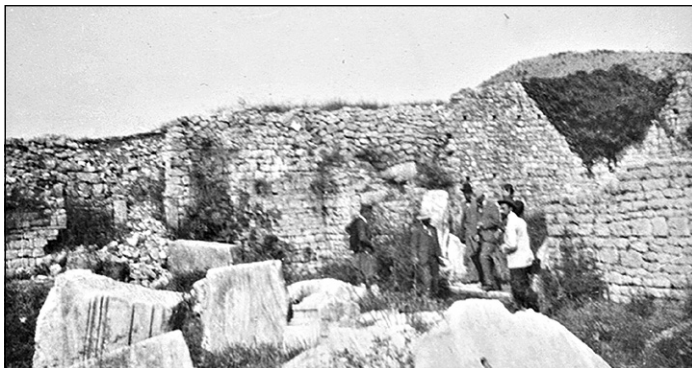


Fig. 1 – Italian mission to Doclea, 1902 (Fondo Antonio Baldacci, Biblioteca dell'Archiginnasio, Bologna).

avoided. However, his design was not motivated so much by the site's cultural and historical values, but rather by the Bar Company's economic interests³. Due to the outbreak of World War I, Pasi's design was never realized. In the end, the railroad leading from Podgorica to Nikšić was constructed in 1947 and 1948 and part of its route, stretching over 900 m, was cut through Doclea, dividing it into two parts and causing permanent devastation (KOVAČEVIĆ 2009, 80).

Italy had also expressed certain interests in Doclea during the Italian occupation of Montenegro, from 1941 to 1943. Roman symbolism played a significant role in the public life of fascist Italy, where the regime propaganda presented itself as a contemporary Roman Empire and Benito Mussolini as the new Augustus (BEGG 2006, 20-21). In the autumn of 1942, in Rome, within the *Direzione dell'Educazione e della Cultura Popolare*, a separate department, specifically the *Archeologia, Monumenti e Belle Arti* was established and entrusted with taking care of the Montenegrin historical and cultural heritage, with particular emphasis on Doclea (BURZANOVIĆ, KOPRIVICA 2011, 229-230). As a consultant in charge of those matters, professor Luigi Crema was engaged as a general conservator for Dalmatia.

Reading the Italian documents concerning these measures, it appears that the collateral benefit of the Italian occupation was the chance to explore Montenegrin heritage, and to see that it was preserved and valued – all as a result of the knowledge, experience and professional human resources donated from Italy. However, in the subtext of the occupying authorities' rhetoric

³ Archivio Ministero degli Affari Esteri, Roma, Primo Levi, *Imprese Italiane nel Montenegro*, Settembre-Ottobre 1912, Relazione a S.E. il Ministro, Roma, Tipografia del Ministro degli Affari Esteri, 1912.



Fig. 2 – The Diana goddess from Doclea
(Archives of Yugoslavia, Belgrade).

on its care for the Roman heritage, a different reality was hidden. Exactly at this time, by order of the Italian Governor to Montenegro, Pirzio Biroli, the museums and private collections were stripped of valuable cultural assets (sculptures, architectural fragments, numismatic collections) which were transported to Italy⁴. In 1942, the relief representing the goddess Diana from Doclea was taken to Rome⁵ (Fig. 2). In 1943, the Italian captain Francesco Pitoli removed from the National Museum of Cetinje the “marble head from the Roma time”⁶. A staff member in the Museum, V. Kirsanov wrote out the address, namely *Al Ministero degli Affari Esteri, Ufficio Collegamento con*

⁴ Arhiv Jugoslavije, Beograd, Fond br. 54, Reparaciona komisija pri Vladi FNRJ, Kulturno umetnički predmeti, Zahtevi (prijave) NR Crna Gora, *Zahtjev za restituciju kulturno umjetničkog dobra iz Italije*, N° 64, 65, 74, 131, 154.

⁵ Arhiv Jugoslavije, Beograd, Fond br. 54, Reparaciona komisija pri Vladi FNRJ, Kulturno umetnički predmeti, Zahtevi (prijave) NR Crna Gora, *Zahtjev za restituciju kulturno umjetničkog dobra iz Italije*, Beograd, 4. mart 1948, N° 37.

⁶ Arhivsko-bibliotečko odjeljenje muzeja kralja Nikole, Cetinje, Fond Muzej, *Revers*, Cetinje, 8. jun 1943; Arhiv Jugoslavije, Beograd, Fond br. 54, Reparaciona komisija pri Vladi FNRJ, Kulturno umetnički predmeti, Zahtevi (prijave) NR Crna Gora, *Zahtjev za restituciju kulturno umjetničkog dobra iz Italije*, Beograd, 4. mart 1948, N° 60.

il Governatorato del Montenegro (Colonello Tancredi), Palazzo del Drago, Via Quattro Fontane 20, Roma, where the artefact was sent to (ROGANOVIĆ 2012, 128-129). The Italian Foreign Affairs Ministry's documents state that the marble head should have been given as a present to the Italian Queen Elena; however it disappeared, most likely, during the transportation⁷. Although we lack a more precise description, the fact that it was considered a worthy present for the Queen implies that it was a significant piece of art. In 1946, within the framework of the restitution of cultural assets, the Yugoslav Government requested that the artefacts which the Italian occupation authorities had taken from Doclea be returned, but without success⁸.

During the time of socialist rule, the Montenegrin authorities relied only on Yugoslav scholars for explorations undertaken in Doclea, when several archaeological campaigns were undertaken from 1954 through 1964, supported by limited funds and inadequate policies for the conservation, preservation and presentation of the site. Italian researchers were again engaged in explorations of Doclea in 2007, where they introduced new technologies (RINALDI TUFİ *et al.* 2008, 71-77; PETT 2010, 7-44; BARATIN 2010, 59-65; RINALDI TUFİ 2010, 45-47; RINALDI TUFİ 2012, 477-489). The research was resumed once more in 2011 (GELICHI *et al.* 2012, 10-40). A further engagement of an Italian research-team is scheduled to take place again in 2018-2020, as a result of cooperation between the National Research Council of Italy (CNR) and the Historical Institute of Montenegro, University of Montenegro (ALBERTI, KOPRIVICA 2017).

SLAVKO BURZANOVIĆ, TATJANA KOPRIVICA

University of Montenegro
Historical Institute
sburzanovic@ucg.ac.me
tkoprivica@ucg.ac.me

REFERENCES

UNPUBLISHED ARCHIVAL SOURCES

Arhiv Jugoslavije, Beograd, Fond br. 54, Reparaciona komisija pri Vladi FNRJ, Kulturno umetnički predmeti, Zahtevi (prijave) NR Crna Gora, Zahtjev za restituciju kulturno umjetničkog dobra iz Italije.

Arhivsko-bibliotečko odjeljenje muzeja kralja Nikole, Cetinje, Fond Muzej.

⁷ Archivio Ministero degli Affari Esteri, Roma, Serie Affari Politici 1946-1950, Jugoslavia, 1946, *Richieste di restituzione di beni, Richiesta della Commissione Jugoslava n. 771/45 (4. giugno 1946-Scultura classica del Museo di Cettigne)*.

⁸ Archivio Ministero degli Affari Esteri, Roma, Serie Affari Politici 1946-1950, Jugoslavia, 1946, *Richieste di restituzione di beni, Ministero degli Affari Esteri, Memorandum per la Commissione Alleata*, Roma, 13 dicembre 1946, N° 41272.

Archivio Ministero degli Affari Esteri, Roma, Primo Levi, Imprese Italiane nel Montenegro, Settembre-Ottobre 1912, Relazione a S.E. Ministro, Roma, Tipografia del Ministro degli Affari Esteri, 1912; Serie Affari Politici 1946-1950, Jugoslavia, 1946, Richieste di restituzione di beni.
Atti parlamentari, Camera dei Deputati, Legislatura XXI-2^a sessione-discussioni-1^a tornata del 16 giugno 1902.

PUBLISHED ARCHIVAL SOURCES

- ALBERTI L., KOPRIVICA T. 2017, *Joint Archaeological Laboratory Italia Montenegro: The Doclea Valley*, «Archeologia e Calcolatori», 28.1, 311-313.
- BALDACCI A. 1991a, *Arheološki izlet dr. Roberta Paribenija u Crnu Goru*, in V. PULEVIĆ, D. VINCEK (eds.), *Crna Gora vrata Balkana. Putopisi i zapisi evropskih botaničara*, Cetinje, Obod, 827-833.
- BALDACCI A. 1991b, *Radovi dvije talijanske studijske misije 1902. i 1903. godine u Crnoj Gori i sjevernoj Albaniji*, in V. PULEVIĆ, D. VINCEK (eds.), *Crna Gora vrata Balkana. Putopisi i zapisi evropskih botaničara*, Cetinje, Obod, 797-826.
- BARATIN L. 2010, *Reljef arheološke lokacije rimskog grada Duklje u Crnoj Gori/Il rilievo del sito archeologico di Doclea città romana in Montenegro*, «Nova Antička Duklja/New Antique Doclea», 1, 59-65.
- BEGG D.J.I. 2006, *Fascism in the desert, a microcosmic view of archaeological politics*, in M.L. GALATY, C. WATKINSON (eds.), *Archaeology Under Dictatorship*, New York, Kluwer Academic/Plenum Publishers, 19-33.
- BURZANOVIĆ S. 2008, *Antonio Baldacci e il Montenegro*, in V. KILIBARDA, J. VUČO (eds.) *Contesti adriatici. Studi di italianistica comparata*, Roma, Aracne, 69-89.
- BURZANOVIĆ S. 2009, *Bar-Virpazar*, in S. BURZANOVIĆ (ed.), *100 godina željeznice Crne Gore*, Cetinje, Obod, 23-52.
- BURZANOVIĆ S., KOPRIVICA T. 2011, *Antičko rimsko nasljeđe u Crnoj Gori i italijanska spoljna politika*, «Matica», 48, 219-230.
- CORA G. 1901, *Nel Montenegro. Impressioni di viaggio*, Roma.
- DE ROSSI G.B. 1874, *Podgoritzza in Albania-Insigne tazza vitrea figurata*, «Bulettno di Archeologia Cristiana», serie 2, anno 5, n. 4, 153-155.
- DE ROSSI G.B. 1877, *L'insigne piatto vitreo di Podgoritzza oggi nel museo Basilewsky in Parigi*, «Bulettno di Archeologia Cristiana», serie 3, anno 2, n. 2, 77-85.
- DUMONT A. 1873, *Séance du 5 février 1873*, «Bulletin de la Société nationale des antiquaires de France», 71-73.
- FINNEY P.C. 1994, *The Invisible God. The Earliest Christians on Art*, Oxford, Oxford University Press.
- GELICHI S., NEGRELLI C., LEARDI S., SABBIONESI L., BELCARI R. 2012, *Doclea alla fine dell'antichità. Studi e ricerche per la storia di una città abbandonata della Prevalitanial/Duklja na kraju antičkog doba. Studije i istraživanja istorije jednog napuštenog grada Prevalitanije*, «Nova Antička Duklja/New Antique Doclea», 3, 10-40.
- KOPRIVICA T. 2013, *Diary entries and photographic documentation of J.A.R. Munro related to the archaeological exploration of Doclea (Montenegro) in 1893*, «Zograf», 37, 1-15.
- KOPRIVICA T. 2017, *Italijanski doprinos istraživanjima Duklje krajem XIX i početkom XX vijeka*, in N. MARTINOVIĆ (ed.), *Zbornik radova sa naučnog skupa Crna Gora i Italija-istorijske, kulturne, jezičke i književne veze*, Podgorica, CANU, 59-68.
- KOVAČEVIĆ B. 2009, *Nikšić-Titograd (Podgorica)*, in S. BURZANOVIĆ (ed.), *100 godina željeznice Crne Gore*, Cetinje, Obod, 75-92.
- KRYZANOVSKAYA M. 1990, *Alexander Petrovich Basilevsky, A great collector of Medieval and Renaissance works of art*, «Journal of the History of Collection», 2, 143-155.

- LEVY P. 1963, *The Podgoritz cup*, «The Heythrop Journal», 4, 1, 55-66.
- MUNRO J.A.R., ANDERSON W.C.F., MILNE J.G., HAVERFIELD F. 1896, *On the Roman town Doclea in Montenegro*, «Archaeologia», 55, 1-60.
- MUNZI M. 2008, *Elemente einer politischen Biographie. Das grosse Spiel: Archäologie und Politik zur Zeit des Kolonialismus (1860-1940)*, Köln, Dumont.
- NAGEL S. 2013, *Die Schale von Podgorica. Bemerkungen zu einem außergewöhnlichen christlichen Glas der Spätantike*, «Bonner Jahrbücher», 213, 165-198.
- PARIBENI R. 1903, *Iscrizioni romane di Doclea e di Tusi*, «Buletino della Commissione Archeologica Comunale di Roma», 4, 374-379.
- PETRICIOLI M. 1990, *Archeologia e Mare Nostrum. Le missioni archeologiche nella politica mediterranea dell'Italia 1898-1943*, Roma, V. Levi.
- PETT L. 2010, *Duklja, Izvještaj sa geofizičkih istraživanja, Oktobar 2007/Doclea, Podgorica, Montenegro. Geophysical survey report, October 2007*, «Nova Antička Duklja/New Antique Doclea», 1, 7-44.
- ROGANOVIĆ S. 2012, *Doclea. Tragična i sramna sudbina nekadašnje antičke metropole*, «Glasnik Narodnog muzeja Crne Gore», 8, 107-133.
- ROVINSKI P. 1909, *Černogorija v jejo prošlom i nastojašem, Geografija.-Istorija.-Etnografija.-Arheologija*, tom II, čast 4 [Montenegro in the Past and Present, Geography-History-Ethnography-Archaeology, vol. II, part 4], S. Peterburg (republished in Cetinje-Novı Sad 1994).
- SALMERI G. 1986, *Epigrafia e storia antica nel Mediterraneo: Il "caso italiano"*, in V. LA ROSA, *L'Archeologia italiana nel Mediterraneo fino alla Seconda Guerra Mondiale*, Catania, Centro Studi per l'Archeologia Greca CNR.
- STICOTTI P. 1908, *Über die Ergebnisse einer Reise nach Doclea, Juli 1907*, «Anzeiger der Kaiserlichen Akademıe der Wissenschaften, Philosophische-historische Klasse», 45, 51-55.
- STICOTTI P. 1913, *Die römische Stadt Doclea in Montenegro*, Schriften der Balkankommission Antiquarische Abteilung Heft 6, Wien, In Kommission bei A. Hölder.
- RINALDI TUFI S. 2010, *Skulptura Marka Aurelija u Muzeju Podgorica/Una testa di Marco Aurelio nel museo di Podgorica*, «Nova Antička Duklja/New Antique Doclea», 1, 45-47.
- RINALDI TUFI S. 2012, *Doclea, Città romana del Montenegro*, in G. DE MARINIS, G.M. FABRINI, G. PACI, R. PERNA, M. SILVESTRINI (eds.), *I processi formativi ed evolutivi della città in area adriatica*, BAR International Series 2419, Oxford, 477-489, BAR Publishing.
- RINALDI TUFI S., BARATIN L., PELOSO D. 2008, *Valorizzazione del sito archeologico di Doclea, città romana in Montenegro*, «Bollettino di archeologia on line», 71-77 (http://www.bollettinodiarcheologiaonline.beniculturali.it/documenti/generale/8_BARATIN_e_altri.pdf).
- ŽIVANOVIĆ M. 2015, *Preisipitvanje čuvene Podgoričke čaše/Revisiting the Famous Podgorica Cup*, «Nova Antička Duklja/New Antique Doclea», 6, 77-108.

ABSTRACT

The Authors consider the interest that Italian government institutions have demonstrated since the late 19th century to the present, in the archaeological exploration of Doclea, the most significant Roman city in Montenegro. It points out the link existing between those interests and the Italian foreign policy towards the Balkans, as well as to the discontinuities in Italy's interest in Doclea and clarification of the reasons for such happenings. The activities of the Italian scientists are set forth, as they individually or as participants of archaeological missions contributed to the research into Doclea and its presentation (Giovanni Battista de Rossi, Guido Cora, Roberto Paribeni, Dante Vaglieri, Piero Sticotti). Attention is also drawn to the negative aspect of the Italian interests in Doclea, specifically the removal of artefacts from the site during the time of the Italian occupation of Montenegro (1941 to 1943).

HISTORICAL AND EPIGRAPHICAL SURVEY OF INSCRIPTIONS FROM DOCLEA

1. FROM THE 1890s TO THE PERIOD BETWEEN THE TWO WORLD WARS

Since 1890, when the systematic archaeological research of Doclea started, some 140 inscriptions had been recorded from the site and its vicinity. Today only 40 survive. They are mainly located at the site and in the archaeological depot of the Museum and Galleries of Podgorica (MARTINOVIĆ 2011, 125-148). Due to the inability to provide adequate protection by the relevant institutions, a large number of inscriptions have disappeared or have been destroyed by the local population and irresponsible researchers. Certain inscriptions mentioned in documentation from the archaeological excavations in Doclea, kept at the Administration for the Protection of Cultural Properties in Cetinje, are still not published. There are photographs of several inscriptions whose present location is unknown: the authors of this paper were not able to find them all.

The interest in inscriptions from Doclea is actually older than any systematic research of the site. Since the mid-19th century, several writers have documented them in their works (NEUGEBAUER 1851, 73-74; DENTON 1877, 72; KNIGHT 1880, 190; MARKOV 2005, 389-393). The great progress made in epigraphy in the second half of the 19th century also influenced the scientific interest in Doclea. In 1873, Theodor Mommsen included several inscriptions from Doclea in the *Corpus Inscriptionum Latinarum*. This epigraphic material was provided by Valtazar Bogišić, who, during his long and systematic research into the legal past of Montenegro, also showed an interest in its epigraphic and numismatic heritage (KOPRIVICA 2019, forthcoming).

In October 1881, after the Montenegrin separation from the Ottoman Empire, a mission from the French government arrived, comprised of Lieutenants Saski and Ansac (VUJOVIĆ 1971, 314-315). French officers also visited Doclea. Lieutenant Saski made drawings of several inscriptions, published a year later by Robert Mowat (MOWAT 1882; SASKI 1882).

During the first systematic research at Doclea, carried out in 1890-1892, some previously unknown inscriptions were found among the remains of the newly discovered *forum*, *basilica*, *thermae*, temples I and II (temple of Dea Roma and temple of Diana). The director of the research, A.P. Rovinski, recorded and later published these inscriptions (ROVINSKI 1890, 12; 1891, 19-21; 1909, 36-39, 55-59). Due to his modest knowledge of Latin epigraphy, some of the inscriptions were not read properly. Inscriptions found at this period were of great importance for understanding the history of Doclea, especially

those on architraves found in the *forum*, referring to *Marcus Flavius Fronto* (CIL III 12695, CIL III 12692, cfr. CIL 13819, CIL III 13820).

These first investigations prompted don Frano Bulić, director of the Archaeological Museum in Split, to send Vid Petričević to Montenegro to report on the excavation results. Petričević visited Doclea in April 1890. His report included copies of several inscriptions that he published the same year (PETRIČEVIĆ 1890a, 1890b).

Piero Sticotti, the most prominent researcher of Doclea, arrived with Luka Jelić in Cetinje in September 1892. Their mission was part of a wider research in Montenegro and Albania, which was conducted at the request of the Directorate of the Archaeological and Epigraphic Seminar of the University of Vienna. Sticotti and Jelić read, copied and made drawings of the inscriptions at the site and in its immediate vicinity (KOPRIVICA 2017, 61). The texts they found at Doclea were readily incorporated into the supplement of the *Corpus Inscriptionum Latinarum* III (STICOTTI 1908, 52). During this mission, as well as in the next two that Sticotti carried out in 1902 and 1907, 68 inscriptions from Doclea and its immediate environs were documented and analysed (STICOTTI 1913, 155-183).

In September 1892, Paul Nicod was also in Montenegro by the order of the French Ministry of Education. The inscriptions he had collected in Doclea on that occasion were published a year later by René Cagnat (CAGNAT 1893). From 1893, the British Archaeological Mission, led by J.A.R. Munro, made great progress in understanding the sacred topography of Doclea (KOPRIVICA 2013). Munro published, together with F.J. Haverfield, the epigraphic material discovered during this mission. These inscriptions, together with the previously known ones (74), were published in the research report (MUNRO *et al.* 1896, 31-57). The most important finding was the *ex voto* inscription of deaconess Ausonia, not preserved today (MUNRO *et al.* 1896, 42-43; ŠEKULARAC 1994, 19-20; KOPRIVICA 2013, 10; SANADER 2013). Some of the inscriptions found in churches (Basilica A, Basilica B and the Cruciform church) are *spolia* from the Roman period. At the end of their mission, the British researchers also made some of the inscriptions from Doclea and its vicinity available for publication in the *Corpus Inscriptionum Latinarum* (KOPRIVICA 2013, 2).

In 1893, Ljuba Kovačević, a professor at Belgrade Higher School, copied four inscriptions from the site, three unknown and the fourth one that had been erroneously transmitted by Cagnat. Kovačević later gave these inscriptions to professor Josip Brunšmid for publishing (BRUNŠMID 1901, 87-88).

During his stay in Montenegro in October 1901, the Italian archaeologist Roberto Paribeni was primarily focused on the inscribed monuments (BURZANOVIĆ, KOPRIVICA 2011, 222-223). The texts found in Doclea and Tuzi were published in 1903 (PARIBENI 1903). Archaeologist Dante Vaglieri, a member of the multidisciplinary scientific mission led by Antonio Baldacci

in 1902 (BALDACCI 1991), published only three, previously unknown, inscriptions. One of them, an altar, is dedicated to the deity Ananka, especially venerated in Greece (VAGLIERI 1904; ŠAŠEL KOS 2013).

The period of the Balkan Wars (1912-1913) and the World War I (1914-1918) was not favourable for any scientific research. However, since in January 1916 Montenegro was occupied by the Austro-Hungarian Empire, Camille Praschniker and Arnold Schober were able to conduct some research in Doclea. Their study of the site was limited to terrain mapping and the finding of some, previously unpublished inscriptions (PRASCHNIKER, SCHOBBER 1919, 1-3).

In the period between the two World Wars, scientific interest in Doclea almost ceased. No scientific mission was organized, nor was any presence of foreign or Yugoslav researchers documented in Doclea. Nevertheless, Antun Mayer (MAYER 1928-1929) and Nikola Vulić (VULIĆ 1931, 124-125; VULIĆ 1933, 64) made a significant contribution to the research of the inscriptions from Doclea during this phase.

2. FROM WORLD WAR II UNTIL TODAY

After World War II, interest in the inscriptions from Doclea was prompted by finds made during systematic excavations throughout the 1950s and 1960s. Most notably, three inscriptions were published by A. CERMANOVIĆ-KUZMANOVIĆ, O. VELIMIROVIĆ-ŽIŽIĆ, D. SREJOVIĆ (1975). The outstanding work of Jaro and Ana Šašel resulted in the gathering of all available data on the inscriptions from this region (ŠAŠEL, ŠAŠEL 1963-1986). In 2011, *The Corpus of Latin and Greek inscriptions from Montenegro* was published (MARTINOVIĆ 2011). However, this *corpus* has certain methodological failings. The part on the inscriptions from Doclea was actually taken from the unpublished catalogue of the former curator of the Podgorica Museums and Galleries, the late Milan Pravilović (MARTINOVIĆ 2011, 9-10). One can observe that many inscriptions have been misplaced and are not represented well. Some new finds were published as individual articles, such as the votive inscription for Neptune (VUČINIĆ 2007; GRBIĆ 2009); passing epigraphic remarks were made by BAKOVIĆ (2011, 24, photo n. 2), SANADER (2013, 8-17), KOPRIVICA (2013, 10), PELCER-VUJAČIĆ (2014, 91-98) and ŽIVANOVIĆ (2014, 35-38).

In the recent years, during the excavation campaigns in 2009 and 2010, several well preserved funerary inscriptions have been found, as shown during the presentation at the Round Table on Doclea held in Podgorica in December 2013. Unfortunately they are still not published or available for scholarly research.

The project for the digitization of ancient inscriptions from Montenegro was started by the Historical Institute with Olga Pelcer-Vujačić as the project coordinator in 2014. We established collaborations and data-sharing with



Fig. 1 – *Epigraphica Montenegro* website homepage.



Fig. 2 – Some of the photos shown in the Images Gallery.

both the EAGLE project (<https://www.eagle-network.eu/>) and Trismegistos (<https://www.trismegistos.org/>). One of the main points in this collaboration was the sharing of images and their presentation on Wikimedia Commons, especially as many inscriptions from this region are still checked from *CIL* drawings. In creating the website, we chose to follow the principles of the Linked Open Data approach, using structured data and so enabling the connection of the digital library to other resources. At first we envisioned this as a searchable database, but it was soon realized that we should first make a digital corpus that uses TEI-XML mark-up, according to the EpiDoc schema and with further quality assistance from EAGLE project members.

In 2016, from the database we produced a webpage: <http://www.epigraphicamontenegrina.me/> (Figs. 1-2). Our own *Epigraphica Montenegrina* database contains about 350 ancient Latin inscriptions from Montenegro, including the ones from Doclea (Fig. 3). Currently as a simple browsing website, it includes texts, ancient and modern locations, as well as photos and translations. Not all metadata is yet present on the website, but collaboration with European databases and projects should enable this feature to appear soon.

3. SOME EXAMPLES OF INSCRIPTIONS FOUND IN THE SECOND HALF OF THE 20TH CENTURY

Some inscriptions found during the second half of the 20th century were known only through documents of the relevant institutions involved in their recovery; these fragments are scattered in several places.

3.1 *Inscription 1*

The photo of this inscription (Fig. 4) was presented in a paper by Baković without any reading being offered, being described as «fragment of stone sculpture» (BAKOVIĆ 2011, 26, plate, II, n. 2). It was found during the campaigns of 2009 and 2010 and is connected with a possible discovery of the central, Capitoline temple of Roman Doclea (BAKOVIĆ 2011, 15). The stone is broken on all four sides, its dimensions currently unknown. Letters are distinct, although the letter L has a very short lower hasta. The text is as following:

FULGU
DIVV

Fulgu[r]
divu[m]

This short text refers to the lightning of Jupiter, god of light and diurnal lightning (as opposed to that of Summanus, deity of lightning at night



EPIGRAPHICA MONTENEGRINA

[Home](#)
[Inscriptions](#)
[Gallery](#)
[Bibliography](#)
[Useful Links](#)
[About](#)
[Contact](#)

Martinović CILMontenegrini 109

© February 11, 2016 [Inscriptions](#) [#109](#)

Type of inscription: Votive inscription
Type of monument: Altar
Language: Latin

Dimensions:
Height: 61.5 cm
Width: 33 cm
Length: 21 cm
Letters size: 2,5-4 cm

Provenance: Doclea
Findspot: area of Podgorica, Zeta river
Current place: National museum of Montenegro, Cetinje
http://www.namuseum.org/index_e.html
Date:

Bibliography:
 • S. Vučinić, Ara posvećena Neptunu i nekoliko nalaza sa antičkog lokaliteta na Lazama Radevića, *Istorijski zapisi* 1-4/2007, 197-203;
 • D. Ožbić, Iz epigrafske baštine antičke Dokođe: jedan natpis posvećen Neptunu pericolum abolutus, *Starine* 59 (2009), 175-180;
 • AE 2009, 1002
 • Martinović, CILMontenegrini 109

Text:
 Neptuno
 sacrum p-
 ariculato-
 m Abolu-
 5 teri Petro-
 nius Aspe-
 r v(otum) s(olvit)
 l(ibens) a(nimo)

Translation:
Commentary:
Photo:



Historical Institute, University of Montenegro – This file is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported license. – Olga Pelcer-Vujačić

← CIL 03 14605

CIL 03 8395 →

Fig. 3 – Screenshot of *Epigraphica Montenegrina* database, with an inscription from Doclea (<http://www.epigraphicamontenegrina.me/martinovic-cilgmontenegrini-109/>).

– Summanum or Summani fulgur), whose epigraphic evidence is much less prominent (*CIL* VI 206, 30879, 30880). However, it seems necessary to make a distinction between the lightning from the cult of Summanus and, in particular, that from the cult of Jupiter, a complex god who cannot be reduced to this single function of a hurler of lightning. For example, in Gallia Narbonensis the cult of lightning was a phenomenon essentially venerated in



Fig. 4 – Inscription 1 (after BAKOVIĆ 2011, plate II, n. 2).

the countryside, which is perfectly logical, since rural dwellers have always been much more sensitive than urban ones to atmospheric phenomena. The event is also perceived in the Roman civilization as a source of life, since it brings the beneficial rain, the source of abundance and agricultural wealth in Mediterranean region (RÉMY, BUISSON 1992, 85).

This new inscription testifies to a worship given to the lightning, just one manifestation of the divine power, perhaps on the very spot where a bolt had struck the ground that thereby became a sacred place. In this form, without the participle *conditum*, Jupiter's bolt is attested in Rome (*CIL* VI 205, 30714, 30878; GASPERINI 1982, 23-28), Ostia (*CIL* XIV 4294), Britannia (*CIL* VII 561) and more frequently in various forms in Gallia Narbonensis. The worship of this divine power was previously unattested in Dalmatia.

3.2 *Inscription 2*

The inscription is fragmented, with its current dimensions measuring 20×16×5 cm (Fig. 5). There are 5 lines, whose letters' dimensions are 2 to 3 cm, being both shallow and worn. It was first published in 2011 (MARTINOVIĆ 2011, 140, n. 127), later revised by Pelcer-Vujačić in 2014 (PELCER-VUJAČIĆ 2014, 92-93, n. 2). Today it is kept in a depot of the Museums and Galleries of Podgorica. Paleographically, this inscription could be dated to the 1st century AD, although there are examples for a later date (PETROVIĆ 1975, 108-121).

--_ERIA
--_SIMA
--_RILLA
--_ULTAN.
--_TIT P S
--_T

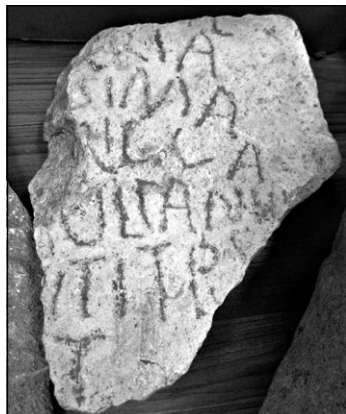


Fig. 5 – Inscription 2 (after PELCER-VUJAČIĆ 2014, fig. 4).

[D(is) M(anibus)l . . . l . . . Val]erial[matri pientis]simal[eVale]rillal [. .
. m]ult(os) an[n(os)] bene vixit] tit(ulum) p(o)s(uit)

Other reconstructions of the name of the deceased are also possible, but less probable. Aprilla: Naronā (*CIL* III 1844), Asseria (*CIL* III 2852) and Salona (*CIL* III 6551) or Surilla: Prijepolje (AE 1980, 699) and Hvar (*CIL* III 3084); KAJANTO 1965, 325; ALFÖLDY 1969, 154, 303.

The question as to whether another part of the inscription exists, as given by Martinović in a drawing, still remains unanswered. It is not certain whether they are even connected; we believe that the other part belongs to a completely different inscription. From the photos, one can tell that both the stone and the letters of the second are completely at odds with the first. Previously believed to be lost, the original piece was located in the depot at the site of Doclea in October 2017.

The text of the fragmented epitaph is:

INO
RAT
XT XX
VS · PATR

and we suggest the following reading:

]INO[
[f]rat[ri]
[vi]x(i)t XX
]us patr[ibus pientissimi]

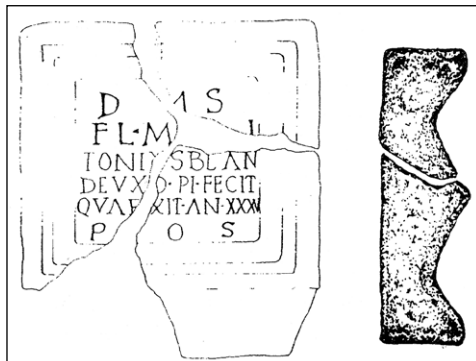


Fig. 6 – Inscription 3 (drawing by MARTINOVIĆ 2011, 147, n. 141).

3.3 *Inscription 3*

Inscription from the top of a small sarcophagus (Fig. 6), double moulded, with the inscription field measuring 34×36 cm. Letters are of various sizes and straight, without ligatures.

Text taken from the original archaeological notes:

D M S
F L MELAN
TONIUS BLAN
DEVXO PI FECIT
QVAE VIXIT AN XXXV
POS

In 2011, as published by MARTINOVIĆ 2011, 147, n. 141:

D(is) M(anibus) S(acrum)
Fl(avius) Meli-
tonius Blan-
de uxo(ri) pi(entissimae) fecit
quae (vi)xit an(nos) XXX
pos(uit)

Today only the lower right part of the inscription is held at the site of Doclea. At present, we are not able to check the differences between the original notes and Martinović's edition. The Latin *cognomen Blandus* is attested all over the whole empire, especially in the Celtic provinces (LORINZ 1994, 302). In the province of Dalmatia, however, there are only three instances: ILJug 888 (Iader), CIL III 8786 (Salona) and this one. These *cognomina* belong to



Fig. 7 – Inscription 4 (photo taken by T. Koprivica in 2011).



Fig. 8 – Second part of the inscription (photo taken by T. Koprivica in 2011).

the so-called ‘laudatory *cognomina*’, meaning here agreeable or sweet (from some scholars’ points of view, see KAJANTO 1965, 282; ALFÖLDY 1969, 165).

3.4 *Inscription 4*

The left part of the inscription is known from a photo taken by Koprivica in 2011, from the documentation of the Administration for the Protection of Cultural Properties in Cetinje (Fig. 7). It is a double moulded plaque. It seems

that the text corresponds with the upper right part of the original inscription, also photographed by Koprivica in 2011 (Fig. 8). Letters are with ligatures, shallow and worn. If the two pieces correspond, the suggested reconstruction of the joint text could be:

D [M]
FLAVIA N
DR I

In the outer moulding:

MEREN[TI] POSUIT
Q
VA
E
V
IXIT
ANN
E

D(is) [Manibus]
Flavia N[...]

[bene] merenti posuit
quae vixit
ann(os)
...e...

This funerary inscription features an Imperial cognomen, very frequent in Doclea. Most members of the elite bear the family name *Flavius* and belong to the Flavian *tribus Quirina*, indicating that an extensive grant of citizenship was made to the upper classes on the founding of the city (ALFÖLDY 1965, 145,182; WILKES 1969, 260).

3.5 *Inscription 5*

Fragment located at the depot at the site of Doclea in October 2017. It has capital letters, beautifully carved, with those of the first line slightly bigger:

SVO
FECIT
suo /fecit

The remaining words are usually the two last words found in a funerary inscription.

4. CONCLUSIONS

Apart from the veneration of Jupiter's bolt, all other inscriptions are simple funerary ones without any decoration, commemorating the deceased and their age, as well as the feeling of loss in the family. Most of the mentioned names here are of Latin origin, but in Doclea several Illyrian names are attested, such as *cognomen Pinnia* (CIL III 12696: *Flavia Pinnia*; RENDIĆ-MIOČEVIĆ 1948, 9; KATIČIĆ 1962, 106-107), *Anna* (CIL III 14600: *Cassia Anna*) and *Tatta* (ILJug 1830: *Epidia Tatta*), and this can be interpreted as evidence of the retention of a strong ethnic identity. Furthermore, the *nomen gentilicium Pletorius* is also attested (CIL III 14602: *L. Pletorius Valens*; ALFÖLDY 1969, 109; ILJug 1848: *Plaetoria Iulia*).

Nevertheless, one should not take funerary monuments as evidence that a given person had just one fixed identity (GRAHAM 2009, 52-53). A Latin name recorded for an individual from a Roman province is not sufficient to prove Roman identity, either ethnic or cultural, nor is it proof of a certain level of competence in Latin (GAVRIELATOS 2017, 142). The native elite adopted Roman material culture and ways of living as a response to the changing political realities, and these changes then filtered through the society as a result of the emulation of the elites by the non-elites (MILLET 1990, 212). For the people of the provinces, being part of the Roman Empire concerned a practical knowledge of how to act within a changing social context, and learning new ways of how to express their place in the local community.

TATJANA KOPRIVICA, OLGA PELCER-VUJAČIĆ

University of Montenegro
Historical Institute

tkoprivica@ucg.ac.me, olgapelcer@ucg.ac.me

REFERENCES

- ALFÖLDY G. 1965, *Bevölkerung und Gesellschaft der römischen Provinz Dalmatien*, Budapest, Verlag der ungarischen Akademie der Wissenschaften.
- ALFÖLDY G. 1969, *Die Personennamen in der römischen Provinz Dalmatia*, Heidelberg, Carl Winter Universitätsverlag.
- BAKOVIĆ M. 2011, *Preliminarni rezultati istraživanja na prostoru kapitolnog brama lokaliteta Doclea/Preliminary results of the research into the area of the capitol temple of the Doclea site*, «Nova Antička Duklja/New Antique Doclea», 2, 9-26.
- BALDACCİ A. 1991, *Arheološki izlet dr Roberta Paribenija u Crnu Goru*, in V. PULEVIĆ, D. VINCEK (eds.), *Crna Gora vrata Balkana. Putopisi i zapisi evropskih botaničara*, Cetinje, Obod, 827-833.
- BRUNŠMID J. 1901, *Arheološke bilješke iz Dalmacije i Panonije, IV, Dalmatia, Doclea*, «VHAD, Vjesnik za Historiju i Arheologiju Dalmatinsku», 5, 87-168.
- BURZANOVIĆ S., KOPRIVICA T. 2011, *Antičko rimsko nasljeđe u Crnoj Gori i italijanska spoljna politika*, «Matica», 48, 219-230.

- CAGNAT R. 1893, *Inscriptiones latines de Doukla (Monténégro)*, «Mémoires de la Société des antiquaires de France», 52, 1-20.
- CERMANOVIĆ-KUZMANOVIĆ A., VELIMIROVIĆ-ŽIŽIĆ O., SREJOVIĆ D. 1975, *Antička Duklja: nekropole [Ancient Doclea – necropoleis]*, Cetinje, Obod.
- CIL, *Corpus Inscriptionum Latinarum* III, *Inscriptiones Asiae, provinciarum Europae Graecarum, Illyrici Latinae. Inscriptionum Orientis et Illyrici latinarum supplementum. Pars posterior*, T. MOMSEN, O. HIRSCHFELD, A. DOMASZEWSKI (eds.), Berlin 1902, apud G. Reimerum.
- CIL, *Corpus Inscriptionum Latinarum* VI, *Inscriptiones urbis Romae latinae, Additamentorum auctarium/Partis quartae fasciculus postremus*, M. BANG (ed.), Berlin 1933, apud G. Reimerum.
- CIL, *Corpus Inscriptionum Latinarum* VII, *Inscriptiones Britanniae latinae*, E. HÜBNER, E. WILLIBALD (eds.), Berlin 1873, G. Reimer.
- CIL, *Corpus Inscriptionum Latinarum* XIV, *Inscriptiones Latii Veteris latinae. Supplementum Ostiense*, L. WICKERT (ed.), Berlin, 1930, apud G. Reimerum.
- DENTON W. 1877, *Montenegro. Its People and History*, London, Dalby, Isbister & Co.
- GASPERINI L. 1982, *Il lapidario Zeri di Mentana*, Roma, Istituto Italiano per la Storia antica.
- GAVRIELATOS A. 2017, *Latinate nomenclature for a Romanized identity: Attempts to construct an aspired displayed identity*, in A. GAVRIELATOS (ed.), *Self-Presentation and Identity in the Roman World*, Cambridge, Cambridge Scholars Publishing, 140-159.
- GRAHAM E.-J. 2009, *Becoming persons, becoming ancestors. Personhood, memory and the corpse in Roman rituals of social remembrance*, «Archaeological Dialogues», 16.1, 51-74.
- GRBIĆ D. 2009, *Iz epigrafske baštine antičke Dokleje: Jedan natpis posvećen NEPTUNO PERICULORUM ABSOLUTORI [Epigraphic heritage of ancient Doclea: an inscription dedicated to NEPTUNO PERICULORUM ABSOLUTORI]*, «Starinar», 59, 175-180.
- II Jug, *Inscriptiones Latinae quae in Iugoslaviā inter annos MCMII et MCMXL repertae et editae sunt*, Situla, 25. Ljubljana 1986, J. ŠAŠEL, A. ŠAŠEL (eds.), Slovenian academy and National museum in Ljubljana Editors.
- KAJANTO I. 1965, *The Latin Cognomina*, Helsinki, Keskuskirjapaino.
- KATIČIĆ R. 1962, *Die illyrischen Personennamen in ihrem südöstlichen Verbreitungsgebiet*, «Živa Antika», 12, 95-120.
- KNIGHT E.F. 1880, *Albania: A Narrative of Recent Travel*, London, S. Low, Marston, Searle, & Rivington.
- KOPRIVICA T. 2013, *Diary entries and photographic documentation of J.A.R. Munro related to the archaeological exploration of Doclea (Montenegro) in 1893*, «Zograf», 37, 1-15.
- KOPRIVICA T. 2017, *Italijanski doprinos istraživanjima Duklje krajem XIX i početkom XX vijeka*, in N. MARTINOVIĆ (ed.), *Zbornik radova sa naučnog skupa Crna Gora i Italija-istorijske, kulturne, jezičke i književne veze*, Podgorica, CANU, 59-68.
- KOPRIVICA T. 2019, *Dokleja u knjaževini/kraljevini Crnoj Gori*, Podgorica, Univerzitet Crne Gore (in press).
- LÖRINZ B. 1994, *Onomasticon Provinciarum Europae Latinarum (OPEL) Vol. I: ABA – BYSANVS*, Budapest, Phoibos Verlag.
- LJUBIĆ Š. 1884, *Dukljanske starine*, «Viestnik hrvatskoga arkeološkičkoga društva», 2, 33-43.
- MARKOV E. 2005, *Putovanje po Srbiji i Crnoj Gori (putne bilješke) [Travels through Serbia and Montenegro (travel notes)]*, priredio i predgovor napisao, D.J. Martinović, Podgorica, CID.
- MARTINOVIĆ J.J. 2011, *Korpus antičkih latinskih i grčkih natpisa Crne Gore, Corpus Inscriptionum Latinarum et Graecarum Montenegri*, Kotor, Matica Crnogorska.
- MAYER A. 1928-1929, *Novopronađeni natpisi u Duklji i oko nje*, «Vjesnik za arheologiju i historiju Dalmatinsku», 50, 65-73.
- MILLET M. 1990, *The Romanization of Britain: An Essay in Archaeological Interpretation*, Cambridge, Cambridge University Press.

- MOWAT R. 1882, *Nouvelles inscriptions de Docléa (Exploration de M. Sasaki)*, «Revue Archéologique», 44, 79-81.
- MUNRO J.A.R., ANDERSON W.C.F., MILNE J.G., HAVERFIELD F. 1896, *On the Roman Town Doclea in Montenegro*, «Archaeologia», 55, 1-60.
- NEUGEBAUER J.L. 1851, *Die Südslawen und deren Länder*, Leipzig, Costenoble und Rummelmann.
- PARIBENI R. 1903, *Iscrizioni romane di Doclea e di Tusi*, «Buletino della Commissione Archeologica Comunale di Roma», 4, 374-379.
- PELCER-VUJAČIĆ O. 2014, *Saxa Loquuntur – Kamenje govori ukoliko ga pustimo [Saxa Loquuntur – Stones speak, if we let them]*, «Istorijski zapisi», 1-2, 91-98.
- PETRIČEVIĆ V. 1890a, *Dukljanske starine (Doclea) (Su dvije Tablice br. VI i VII)*, «Buletino di Archeologia e Storia Dalmata», 7, 99-106.
- PETRIČEVIĆ V. 1890b, *Dukljanske starine. (Doclea)*, «Buletino di Archeologia e Storia Dalmata», 8, 113-119.
- PETROVIĆ P. 1975, *Paleografija rimskih natpisa u Gornjoj Meziji*, Beograd, Archeološki Institut.
- PRASCHNIKER C., SCHÖBER A. 1919, *Archäologische Forschungen in Albanien und Montenegro*, Wien, In Kommission bei A. Hölder.
- RÉMY B., BUISSON A. 1992, *Les inscriptions commémorant la chute de la foudre dans les provinces romaines de la Gaule. A propos d'un nouveau document découvert à Saint-Geoire-en-Valdaine (Isère)*, «Revue archéologique de Narbonnaise», 25, 83-104.
- RENDIĆ-MIOČEVIĆ D. 1948, *Ilirska onomastika na latinskim natpisima Dalmacije*, Split, Slobodna Dalmacija.
- ROVINSKI P.A. 1890, *Raskopka drevnej Dioklei, proizvedennaja po ukazanju i na ščet' ego v' isočestva černogorskago knjazja Nikolaja (Ot' 22-go janvarja do 11-go fevralja 1890. g.)*, «Žurnal Ministerstva narodnogo prosvěšenijsa», S. Peterburg, 1-17.
- ROVINSKI P.A. 1891, *Predloženie raskopki drevnej Dioklei (Ot' 22. 02 do 12. 05 1891: rabočih' dnei bylo 35)*, «Žurnal Ministerstva narodnogo prosvěšenijsa», S. Peterburg, 15-33.
- ROVINSKI P. 1909, *Černogorija v jejo prošlom i nastojašem, Geografija.-Istorija.-Etnografija.-Arheologija*, tom II, čast 4 [Montenegro in the Past and Present, Geography-History-Ethnography-Archaeology, vol. II, part 4], S. Peterburg (republished in Cetinje-Novi Sad 1994).
- SANADER M. 2013, *O sudjelovanju žena u radu rane crkve na primjeru jednog epigrafskog spomenika iz Duklje/On the participation of women in the work of the early church, based on the epigraphic inscription from Duklja*, «Nova Antička Duklja/New Antique Doclea», 4, 8-17.
- SASKI F. 1882, *Notice sur l'état actuel des ruines de Docléa*, «Revue Archéologique», 44, 74-77.
- STICOTTI P. 1908, *Über die Ergebnisse einer Reise nach Doclea, Juli 1907*, «Anzeiger der Kaiserlichen Akademie der Wissenschaften, Philosophische-historische Klasse», 45, 51-55.
- STICOTTI P. 1913, *Die römische Stadt Doclea in Montenegro*, Schriften der Balkankommission Antiquarische Abteilung Heft 6, Wien, In Kommission bei A. Hölder.
- ŠAŠEL A., ŠAŠEL J. 1963-1986, *Inscriptiones Latinae quae in Iugoslavia inter annos MCMII et MCMXL repertae et editae sunt*, Ljubljana, Narodni muzej v Ljubljani.
- ŠAŠEL KOS M. 2013, *Ananca: Greek Ananke Worshipped at Doclea (Dalmatia)*, in W. ECK, B. FEHÉR, P. KOVÁCS (eds.), *Studia Epigraphica in Memoriam Géza Alföldy*, Bonn, Dr. Rudolf Habelt GmbH, 295-306.
- ŠEKULARAC B. 1994, *Tragovi prošlosti Crne Gore. Srednjovjekovni natpisi i zapisi u Crnoj Gori kraj VIII – početak XVI vijeka [Traces of past in Montenegro. Mediaeval inscriptions and writings in Montenegro end of the 8th-beginning of the 16th century]*, Cetinje, Obod.
- VAGLIERI D. 1904, *Iscrizioni romane del Montenegro*, «Buletino della Commissione archeologica Comunale di Roma», 32, 284-285.

- VUČINIĆ S. 2007, *Ara posvećena Neptunu i nekoliko nalaza sa antičkog lokaliteta Laze Radevića* [Altar dedicated to Neptune and other findings from the ancient site Laza Radević], «Istorijski zapisi», 1-4, 197-209.
- VUJOVIĆ D. 1971, *Crna Gora i Francuska 1860-1914* [Montenegro and France 1860-1914], Cetinje, Obod.
- VULIĆ N. 1931, *Antički spomenici naše zemlje* [Ancient Monuments of our Country], Spomenik LXXI, drugi razred, knjiga 55, Beograd, Srpska Kraljevska Akademija.
- VULIĆ N. 1933, *Antički spomenici naše zemlje* [Ancient Monuments of our Country], Spomenik LXXV, drugi razred, knjiga 58, Beograd, Srpska Kraljevska Akademija.
- WILKES J.J. 1969, *Dalmatia*, London, Routledge and Kegan Paul.
- ŽIVANOVIĆ, M. 2014, *Zanatske radionice kasnoantičke Dokleje* [Craft Workshop in Late Roman Doclea], Podgorica, JU Muzeji i galerije Podgorice.

ABSTRACT

This paper presents a historical and epigraphical survey of the inscriptions from Doclea. Due to devastation and inadequate protection by the relevant institutions, a large number of inscriptions have disappeared or have been destroyed by the local population and irresponsible researchers. Bearing that in mind, every new inscription is important for understanding the history and everyday life in Roman Doclea.

THE URBAN PLANNING OF DOCLEA: REMOTE SENSING AND TOPOGRAPHICAL SURVEY

1. INTRODUCTION

One of the most innovative aspects of the Doclea project is the interdisciplinary approach that enables surveying at different levels of scale: from the diachronic analysis of the landscape use, we can pull back the focus to the reconstruction of the urban organization, or go down to a detailed analysis of the individual monuments.

In this paper we present some preliminary observations concerning the urban planning of Doclea, with particular attention to the shape and extent of the urban layout. The hypotheses are based on the results drawn from study of the published data, analysis of ancient and modern cartography and systematic aerial (drones and satellites) and topographical surveys. It is important to appreciate that a methodological approach based on remote sensing data and their photo-interpretation was never to now adopted in the study of Doclea.

F.C., P.Me., P.Mo.

2. DOCLEA AND THE ROMAN PROVINCE OF DALMATIA

Doclea is one of the most thoroughly explored cities in the SE part of the Roman province of Dalmatia. Lying at the confluence of the rivers Zeta and Morača, near the Skadar Lake, the Flavian *municipium* of Doclea is located in the interior of the Roman province, between the Adriatic Sea, which was characterised by an early process of Romanization and urbanization, and the inner mountain area, which was abundant in raw material deposits but difficult of access and inhospitable and therefore less permeable to Roman cultural influences.

Apart from the railway constructed between 1947-1948, which divided the city into two parts and permanently destroyed many archaeological structures, the absence of modern buildings and the lack of intensive agricultural activities means that Doclea today preserves to an extraordinary degree both its urban and architectural combination, whose layout is still intelligible in its basic components. The Roman city has been the focus of systematic archaeological investigations since the end of the 1800s (see BURZANOVIĆ, KOPRIVICA this volume). At the beginning of the 1900s, the first plans of the inhabited area were drawn up and the main public building structures were

investigated. Piero STICOTTI's plan (1913) is certainly the most complete and reliable one (Plate 1).

No significant and systematic urban-planning studies were conducted in Doclea until the new millennium. As a consequence, scholarly attention was mainly devoted to making an architectural comparative evaluation between the main Roman buildings of Doclea (*forum*, *Capitolium*, *basilica*, temples, *thermae*, etc.) and those of other well- or less-known Roman cities (see SFAMENI, D'EREDITÀ, KOPRIVICA this volume). As for the urban-planning layout, Doclea has generally been defined as a city built to conform to the terrain, probably without a regular plan, but with its main road axes well-identifiable (RINALDI TUFİ 2004).

From 2000 onwards, new strategies of data acquisition techniques and the development of geo-referencing methods in a GIS environment aroused the interest of a number of archaeological research teams. At the same time, renewed attention was paid to the urban planning and monumental architecture of the Roman cities in Illyria, in Dalmatia and along the coasts of the Adriatic Sea¹. Doclea and its territory became a magnet for experts attracted both by the favourable ground conditions for the undertaking of geophysical and remote sensing survey activities and for experimenting with drone-mapping technologies². All the efforts were concentrated on re-interpreting archaeological remains, integrating past documentation to achieve new technological outcomes, and producing 3D virtual reconstructions of its architectural and urban heritage.

In particular, during the first decade of the 21st century two important interdisciplinary initiatives were promoted. As part of the 'New Ancient Doclea Project', jointly sponsored by the Municipality and the Museum of Podgorica, the British School at Rome along with the Archaeological Prospection Services of Southampton University, a geophysical survey was conducted (PETT 2010), while the Urbino University 'Carlo Bo' undertook a topographic and building survey (RINALDI TUFİ, BARATIN, PELOSO 2010; BARATIN, CHECCUCCI, PELOSO 2010). A GIS platform was implemented, a new digital map and a DEM of the Roman city were produced, and parts of the ancient *forum* were reconstructed by laser scanner surveying techniques. As part of the second project, also sponsored by the Podgorica Municipality and focused on Doclea in the late antiquity and early medieval periods, the Venice University Ca' Foscari

¹ DE MARINIS *et al.* 2012, and in particular RINALDI TUFİ 2012; for an update see the journal «New Antique Doclea» and for ICT projects and virtual reality applications, see also MOSCATI in press. As an example of an innovative research project on the Roman *castrum* of Burnum, jointly promoted by Italian and Croatian scientific institutions and aimed at integrating new technological solutions, see lastly CAMPEDELLI, DUBBINI, MONICA 2017.

² See in particular the docu-film 'Italia e Montenegro, solo un piccolo mare', produced in 2016 by the CNR-ITABC (<http://www.itabc.cnr.it/progetti/italia-montenegro-solo-un-piccolo-mare>).

(GELICHI *et al.* 2012) carried out a new digital survey of the main ecclesiastical buildings, superimposed their plans on the numerical map of the city, and made a census and comparison of the wall techniques.

In 2017, as part of the CNR 'Joint Archaeological Laboratories', the Italian and Montenegrin team jointly promoted a new research project, which is now in progress. One of its first actions was to gather past and new archaeological documentation of the ancient city of Doclea onto a single digital platform. Two new digital base maps were created to support the research activity. The first one (Plate 2) shows the central part of the city, with Roman remains and the railroad layout verified on site thanks to the integration of several multi-sources data (archival and cadastre maps, satellite and drone orthophotos) and surveying methods (onsite GPS survey and total station measurements).

In the second one (Plate 3), using the satellite image of the urban area as a basis, the results of both geophysical prospections (red) and archaeological survey (green), as well as GPS data concerning architectural elements and the cross of roads (cyan), are geo-referenced and shown in multiple colors. Lastly, the blue lines show the hypothetical reconstruction of the urban layout, based on terrain data and some urban comparisons in Italy and in the Roman Provinces, as well as on latest trends in the topographical studies of the 'geometric' urban grids of Roman cities (see lastly SOMMELLA 2018).

P.Mo.

3. METHODOLOGICAL ASPECTS

3.1 *Investigation by remote sensing*

The term 'remote sensing' refers to all the remote photo-shooting systems; in this project all the passive detection systems (GOMARASCA 2009), installed on satellite, aerial and unmanned aerial vehicles (UAV), have been included in order to support traditional surveys and operate at various levels of scale and time. We have therefore selected a dataset compiled from sources of several periods, consisting of historical and recent cartography, aerial photos (in particular, a very clear historical photo taken during the World War II³), and finally recent drone and satellite images in raster format (Tab. 1).

The quality and quantity of information that can be deduced from the remotely sensed images depend on the technical specifications of the sensors used during the shooting phases. The spatial resolution is among the most important features of the observation systems, as it is related to the ability to

³ Istituto Geografico Militare, Firenze, 1942, Flight 26.09.1942, series 52, frame 42.

DATASET	RESOLUTION	FORMAT
GeoEye-1 Satellite images belonging to Google Earth™ 2017 Google Inc., acquired on 17th October 2016	2 m/px, 0,25 m/px, 0,125 m/px	raster
Satellite images (World View-2, World View-3 and GeoEye-1) belonging to Google Earth™ 2017 Google Inc. acquired from 29th August 2014 to 14th August 2016	0,25 m/px	raster
Detail of World View-3 satellite image belonging to Google Earth™ 2017 Google Inc. acquired on 15th June 2015	0,25 m/px	raster
World View-3 satellite images belonging to ©Esri ArcGis of Digital Globe and Compagnia Generale Riprese Aeree (CGR Spa) acquired on 29th August 2014	0,84 m/px	raster
Images from UAV, model Phantom 4 Pro, acquired on October 2017 and April 2018	0,02 m/px	raster
Cartography of the site with emerging structures		raster
Plan of Doclea designed by P. Sticotti (1913)		raster
Re-elaboration of the site cartography (from General Plan 2008. Archaeological Remains and Anthropical Elements, TAV 06), with plans of the monuments (GELICHI <i>et al.</i> 2012)		raster
Digital Terrain Model (DTM)	20 m	raster
Map of the archaeological survey	1:25.000	raster
GPS points		vector
Extraction of contour lines		vector

Tab. 1

interpret the detected scene. For this work, we used images with a very high spatial resolution (2 cm/px).

The aerial photos acquired by means of a drone (Phantom 4 Pro model) have been subjected first to a pre-processing phase, before being used for the interpretation. In this way it was possible to obtain the geo-referencing of the raw images and to make them geometrically appropriate to the chosen reference system (UTM, WGS84).

During the archaeological photo-interpretation phase, different processing techniques have been applied, to better emphasize the minimal differences among the pixel values in terms of colour, hue and saturation (LIU, MASON 2016). Finally, the images have been interpreted from an archaeological and topographic point of view, trying to attribute a precise meaning to each single trace, and then comparing it with our hypotheses and with the results obtained through the archaeological survey.

P.ME.

3.2 The archaeological survey

The survey has concerned the territory within the city walls, with the following two objectives in mind: first, the control and geo-referencing of the monuments still visible above ground that were studied and surveyed by the British team at the end of the 19th century (MUNRO *et al.* 1896) and by Sticotti in 1913 (STICOTTI 1913); and then the identification and positioning

of the emerging structures probably related to the residential quarters of the city (Fig. 1).

For reasons of clarity in terms of visibility, the research has mainly focused on the land between Zeta and Morača, southward of the *forum*, while the area to the E of the paved road (*cardo maximus*), from the *forum* to the churches area, will be explored in future field campaigns, as it is now covered by dense vegetation. The territory chosen has been surveyed completely, resulting in an almost total coverage of the area under investigation (Fig. 2). In some places the growth of short-lived vegetation and the accumulation of stones prevented investigation, as in the case of an area S of the temple of Diana. Particular attention was paid to the analysis of dry stone walls, which today have the function of dividing up the landscape, but which in many cases follow the orientation of the Roman city. Below them, in fact, it is possible to identify the alignments of the Roman structures, recognizable by the presence of more regular limestone blocks and by the use of mortar.

The emerging walls were positioned by means of a differential GPS Topcon GR5 that offers an accuracy of about 1 cm. The antenna reference has always been placed at a fixed point inside the *basilica*, while the rover, mounted on the pole, has been used in the stop-and-go mode (GABRIELLI 2001; COLOSI, GABRIELLI, LAZZARI 2006). By using the rover, the coordinates of the corners of the structures and the alignments of the walls have been acquired (Fig. 3A), so that they could be inserted and studied within a Geographical Information System (GIS) (Fig. 4).

F.C.

3.3 *The GIS construction*

The historical-topographical study of this area was greatly facilitated by the use of a GIS, through which a large volume of data, also heterogeneous, related to the Roman city in all its natural and anthropogenic components, were managed, analysed and processed (BIALLO 2006). The combination of remote sensing techniques with a GIS allows one to elaborate and manage large quantities of spatially distributed data. These techniques are ideal for advanced site-selection studies and their application for archaeological sites. The GIS collects, on different layers, the cartographic data, the 3D modelling of the terrain and historical buildings, the georeferenced database with some fundamental contents (such as the archaeological map built on the basis of the literature), the map of the archaeological investigations, and the photo-interpretation of the remotely sensed images (CIRELLI 2016, 210).

In order to represent the natural elements of the landscape, a land-use map, a gradient map and an altimetric map have all been constructed. The 3D gradient map is important in order to understand the altimetric characteristics

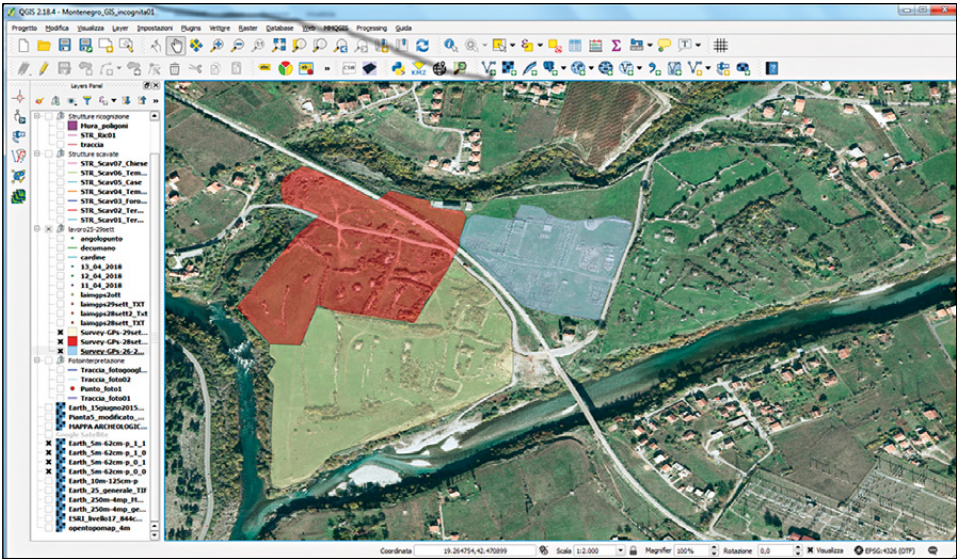


Fig. 1 – GIS elaboration, with the extension of the surveyed area.



Fig. 2 – The territorial survey. The image displays the survey routes followed on three different days, as registered by tablet.



Fig. 3 – A: acquisition of coordinates by means of differential GPS; B: corner of a masonry structure standing in the SE part of the Doclea plateau; C: paving in limestone slabs covering a channel in the SW part of the plateau; D: stone paved road identified during the survey.

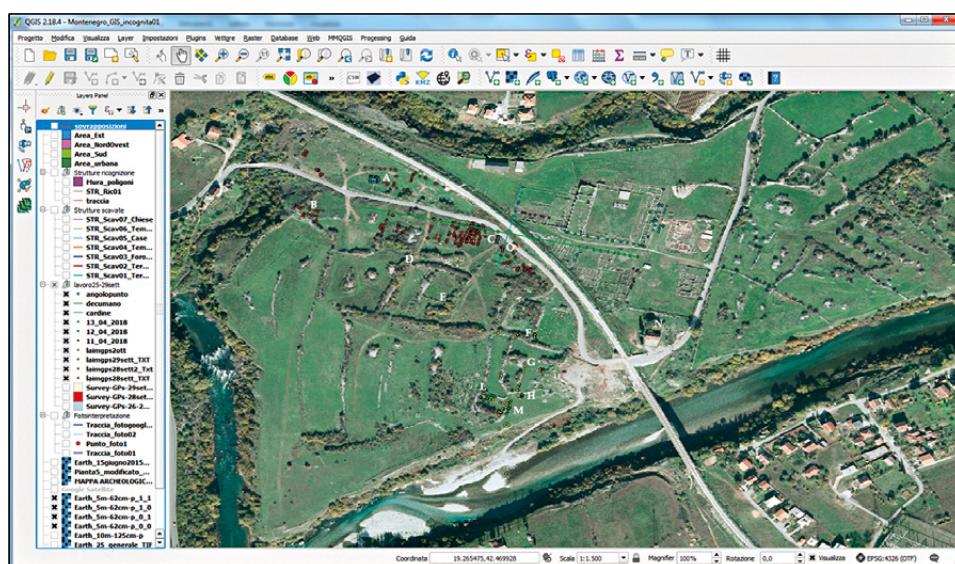


Fig. 4 – Satellite image with the GPS points superimposed. The different colours correspond to the different days of acquisition.

of the territory. To produce this map, the Spatial Analyst extension of the QGIS software was used: in this way we obtained a series of classes in which the highest value represents the maximum slope on the territory.

The possibility of separating or overlapping the different layers, each representing a specific theme or set of information, and the opportunity of questioning them and relating them to each other in variable combinations, produced objective information and a synoptic view of the archaeological site, useful for a better reading and interpretation of the settlement model.

Moreover, the GIS provided useful elements for the future processing of models aimed at protecting the site and its environs. The GIS is an 'open' tool: it is possible to update or enrich the data with greater detail or add new information acquired during future archaeological and aero-topographic researches. In fact, the updating of information should be continuously reviewed and improved, given the speed of changes and alterations that occur in a landscape subjected to anthropic activities and, at the same time, to environmental phenomena.

P.ME.

4. THE RESULTS OF THE TOPOGRAPHICAL INVESTIGATION

4.1 *Interpretation of the remote sensing data*

The city of Doclea, located within a large trapezoidal plateau, stands at the confluence of two important waterways, which run along the southern side (Zeta) and along the western side (Morača), while the northern side is bordered by a small stream (Širalija). Within the archaeological area of Doclea, there are no modern buildings. Though there are agricultural activities, part of the terrain is left uncultivated. The actual landscape conserves yet today some elements of the Roman city: the walls and several other structures are present on the surface. The *forum* is located in the centre of the city; the remains of the *basilica*, of the *Capitolium* and of two bathing buildings, the so called small and large *thermae*, cluster round it.

On the remotely sensed images, the perimeter of the city is visible as a clear line. On the eastern side, the walls are placed next to a darker trace, attributed to a ditch or moat. Further, the northern side of the settlement is protected by walls which follow a non-linear course while, along the southern side, the walls extend along a line that follows the river.

The continuity of the walls is interrupted by two urban gates, still today identifiable by the presence of the roads which pass through them (ŽIVANOVIĆ, STAMENKOVIĆ 2012). A gate represents a potential vulnerable point within a defensive structure: it requires garrisoning, bastions or defence towers. One structure identified on the N walls has been investigated by a recent

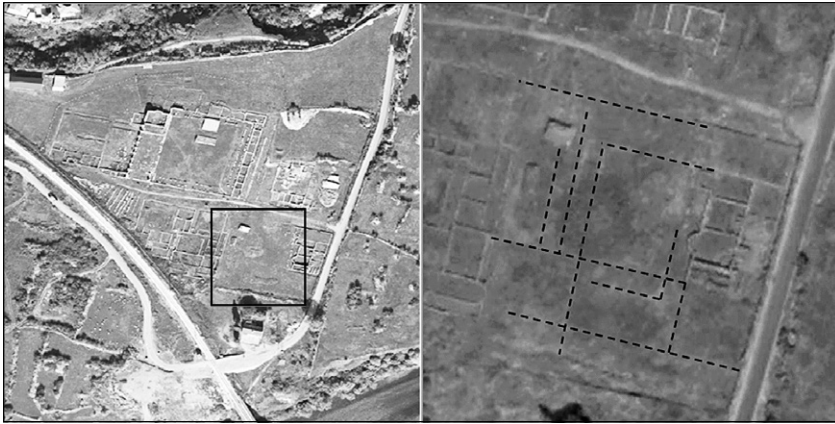


Fig. 5 – Satellite image of the *forum* area. On the right, the archaeological photo-interpretation of the *thermae* zone (World View-3 satellite image belonging Google Earth™ 2017, Google Inc. acquired on 15th June 2015).

archaeological excavation conducted by the Centre for Conservation and Archaeology of Montenegro. This structure could be a tower or bastion with the defensive purpose of controlling men and animals entering the Roman city.

The photo-interpretation was supported by geophysical research and by archaeological surveys carried out at different times. By using the remote sensing data, numerous archaeological features have been characterized by analysing the vegetation status. In particular, the identification of archaeological traces in the *forum* area is the result of the spectral difference between the surfaces above the ancient structures and those in the surrounding area. This result is achieved because of the different value of absorption and reflection of the vegetation in the Visible and Near Infrared wavelengths. The anomalies, interpreted as Roman structures, suggest that the two *thermae* were part of the selfsame complex, since their traces follow the same alignment as the walls visible above ground (Fig. 5). This hypothesis was confirmed by the recent geophysical tests carried out in the area that have highlighted the traces of masonry structures (see COZZOLINO, GENTILE this volume).

Employing the same dataset, we found also signs related to buildings and anomalies connectable to the internal road network, which is particularly regular in its lay-out. Several traces exist that are appropriate for dwellings, ancient roads or other structures of anthropic origin. Archaeological alignments identified in the northern area of the *forum* have allowed the reconstruction of a part of the city planning. Among them, is an anomaly evident to NW of the *basilica*: it is a clear round signal, characterized inside by a series of bright features, which represents a disturbance in the area studied.

Thus, several structures identified in the area of Doclea greatly assist the study of the inner organization of the urban area. An accurate analysis of the buried structures and the visible monuments has offered sufficient topographical references to define the urban road network, even before any systematic excavation activities are carried out. All the archaeological information (roads, urban walls, parts of buildings) garnered was beneficial in estimating the form and extension of the Doclea *insulae*. Now, only a prompt and direct intervention on the ground can confirm the hypothesis so formulated.

P.Me.

4.2 *The results of the archaeological survey*

The first part of the survey has investigated the monuments to the S of the *decumanus maximus*, as exhaustively described by Sticotti: the temple of Dea Roma, the private house and the little private temple and the temple of Diana (STICOTTI 1913) (Plate 1; Plate 3).

The structures visible on the ground are in part recognizable as those indicated on the map of the city dated to 2012 (ŽIVANOVIĆ, STAMENKOVIĆ 2012). It was possible to detect a portion of the *temenos* and the *podium* of the temple of the Dea Roma, as well as the enclosure of the private temple and the base of the monument inside. The structures of the *domus* are still quite well preserved: the rooms are arranged around a central courtyard and a cocciopesto-lined pool (Fig. 4, red points; Plate 3, private house). The temple of Diana, however, has now practically disappeared: it is possible to identify only part of the *podium* and a segment of the paving of square limestone blocks.

A series of structures with an orientation different to that of the Roman city is visible in the portion of land between the road and the railway, where in 2017 a bath-building was excavated, close to the walls near the tower h (Fig. 4, A and B; Plate 3, A and B).

Regarding the city layout, the most significant findings were made to the S and E of the *domus* and near to the SE section of the walls. To the E of the *domus*, an alignment of paving stones (*basoli*) appropriate to a *cardo* of the city was identified (Fig. 3D; Fig. 4, C; Plate 3, C). It is possible to distinguish the western side of the road, though the eastern one is hidden in the ground. The discovery of the *cardo* was fundamental, as we will see, for the hypothetical reconstruction of Doclea's *insulae*.

About 10 m E of the road, walls on the same line emerge, though a channel made of small blocks, of which both sides are visible, presents a totally divergent orientation (Fig. 4, O). Moreover, some structures along the dirt-road SW of the *domus* are very intriguing: a wall covered by vegetation could trace the line of an ancient *decumanus*, and another wall S of this has the same orientation (Fig. 4, D and E; Plate 3, D and E).

The structures that are perfectly visible and in some cases preserved to some height (Fig. 4, F; Plate 3, F) in the area SE of the plateau are also oriented according to the layout of the Roman city. The alignment of these structures, covered by the modern dry walls, can be followed for a long distance and, at least in one case, seems to coincide with the path of a *cardo* (Fig. 4, G; Plate 3, G).

Near the tower n (Plate 3), a probable paving of limestone slabs was found, covering a channel constructed from small irregular blocks assembled with mortar (Fig. 3C, Fig. 4, H; Plate 3, H). The discovery of this paved area could indicate a public building of a certain importance, as can be observed by similar cases in different areas of the *forum* and in the main temples. The hypothesis is further supported by the presence, a little further S of these remains, of a mighty structure, still standing to some height, that delimits the corner of a large quadrangular space (Fig. 3B; Fig. 4, L; Plate 3, L). Within this space, is the corner of a second structure and a series of parallel and perpendicular walls. It is interesting to note that the eastern wall of the probable building has a curvilinear pattern (Fig. 4, M; Plate 3, M). The construction technique, of small squared blocks assembled with mortar, is the same as in the buildings of the *forum*. On Sticotti's map, the presence of more structures a little further S of this area is designated (Plate 1).

Finally, walls, architectural fragments and columns emerge around the modern building, used as a school in the past, where both Munro and Sticotti indicated the presence of ancient constructions (Fig. 4, N; Plate 3, N).

F.C.

5. SOME PRELIMINARY NOTES ON THE URBAN PLAN

As with the cities of the Italic peninsula, so also the other centres of the Empire were founded on the basis of a rationalization of urban spaces that corresponds to common needs and, above all, to the Roman pattern. The essence of a typical Roman city plan, after a period of functional and aesthetic experimentation, became a strong, exportable and instantly recognizable concept (CONVENTI 2004, 13-14).

Analysing the collected data, it is possible to propose a first reconstruction of the Doclea urban plan which, naturally, can only be verified with further research and with excavation on the spot. The hypotheses presented in this paper are entirely preliminary, based as they are on the interpretation of the images and the archaeological survey, on the geophysical data and on some GPS measurements of well recognizable architectural points.

In order to reconstruct the shape and width of the *insulae*, it was necessary first to determine the width of the roads, at least those of the main ones that crossed the monumental area of the city. Recent archaeological researches conducted by the Centre for Conservation and Archaeology of Montenegro have confirmed that the *decumanus maximus* had a width of 10 m and was



Fig. 6 – Satellite image of Doclea. In red, the ancient structures that overlap the Roman roads.

flanked along the southern side by a covered walkway. The geophysical anomalies identify the colonnade (see COZZOLINO, GENTILE this volume) and a base of a column came to light during the archaeological excavation. The considerable size of the *decumanus* of Doclea can be compared with those of some Augustan cities of northern Italy, characterized by a regular layout, but conditioned by an important pre-existent communications network, such as Libarna, Verona, Concordia and Tridentum (Libarna: PANERO 2000, 115-131; Verona: CAVALIERI MANASSE, BRUNO 2003; Concordia: CONVENTI 2004, 132-134; Tridentum: CONVENTI 2004, 141-143; ROSSI *et al.* 2008). The main axes of the cities were frequently embellished over time as happened, for instance, at Aquileia where paved roads lined with porticoes are positioned close to the *forum* (BERTACCHI 2003; MUZZIOLI 2004).

To calculate the width of the *cardo*, the alignment of the stone paved road between the *forum* and the *Capitolium* was considered: clearly visible on the ground even if not continuously, this runs along the walls on the western side of the *Capitolium* (Plate 3, S1). The distance from the eastern side of the road to the eastern limit of the *forum* is 8 m (Plate 3, S2); the 10 m measured from a threshold (Plate 3, S3) indicates the distance from an entrance to the *Capitolium* up to the same wall of the *forum*. This latter measurement should correspond to the width of the *cardo*, including a pedestrian footpath.

That this too was a porticoed way is testified to by the geo-radar investigations: they highlight a colonnade along the eastern side of the road. The *cardo* is clearly visible on the geophysical map, S of the *decumanus maximus* (see COZZOLINO, GENTILE this volume; Plate 3, G1): the western limit of the anomaly here coincides with the alignment of large quadrangular blocks, assembled without mortar, that emerge inside the large *thermae* – they could be related to a paved area (Fig. 6 A; Plate 3, S4).

The measurement of the distances between the corners of the public buildings that overlook the *decumanus* allowed us to formulate the first notions on the city planning. It has been verified that the southern facade of the *forum* runs for 59 m (Plate 3, from S2 to S5). The same measurement can be seen between the wall that runs E of the *Capitolium* and the eastern edge of the *cardo* that passes between the *Capitolium* and the *forum* (Plate 3, from S3 to S6).

From the NE corner of the small *thermae* to the NW one of the large *thermae*, 128 m are measured: this should correspond to two *insulae* (of 59 m apiece) separated by a *cardo*, as calculated with a width of 10 m (Plate 3, from S7 to S8).

A further verification of the distances was made by projecting southward the alignment of the wall which closes the block of rooms to the W of the *basilica* (which is a limit of an *insula*) up to the intersection with the alignment of the northern front of the large *thermae* (blue and green lines in Fig. 4; Plate 3, S9). In this way the NW corner of an *insula* is delineated: one that seems to be perfectly in line with a structure found in the western area of the Diana temple (Fig. 4, O; Plate 3, G2). Measuring 59 m from this point towards the large *thermae*, one may reconstruct the probable N front of the *insula* (Plate 3, from S9 to S10). The NE corner (Plate 3, S10) would then be aligned with the E wall of the *temenos* of the Diana temple, as reported on Sticotti's map, and with some segments of walls identified during the survey. The distance between the *temenos* wall and the western front of the large *thermae* is 10 m and confirms, once more, the passage of a *cardo* between the two *insulae* (Plate 3, from S10 to S8).

Finally, at 10 m westward from the eastern front of the *insula* thus graphically reconstructed, the road identified during the survey runs (Fig. 3D; Plate 3, C), while the NW corner of the enclosure of the little temple in the private house – which should correspond to the limit of the next *insula* – is located at a distance of 63 m from the road (Fig. 6, C; Plate 3, from C to S11). This last measurement does contrast with the 59 m verified for all the *insulae* along the *decumanus maximus*, but this apparent difference can perhaps be clarified by referring to the drawing of the building by STICOTTI (1913, fig. 37; Plate 1). On that map, inside the enclosure two perpendicular walls of squared stone blocks are drawn: these, according to the author, coincide with the edges of a paved area. The last could be the limit of the sacred area in a phase preceding the one visible today. Significantly, the distance between the western wall of the *temenos* and the alignment of squared stone blocks

	URBAN SYSTEM	ROADS NETWORK	INSULAE	FORUM
Type		Orthogonal		Central
Shape	Trapezoidal		Square (?)	Rectangular
Modulus			59x59 m (?)	59 x75 m
Geographical conditions	Hydrography: all sides are influenced by the presence of rivers			
Location	N of Podgorica			
Orientation	NE-SW	<i>Decumanus</i> NW-SE		
Road width		<i>Decumanus</i> 10 m (?) <i>Cardo</i> 10 m (?)		
Perimeter	About 2400 m			268 m
Surface	28 ha			4425 sqm

Tab. 2

corresponds on Sticotti's map to 4 m. The gap between the road and this paved area would therefore be exactly 59 m.

Thus, the constant measurement of 59 m seems to be present even in the NS delimitation of the *insulae*. The complex of the *thermae* is 59 m in length and, projecting and replicating this distance along the plateau southward of the *forum*, especially along the western sector, one constantly encounters dry stone walls built on ancient structures with a NE/SW orientation. The *forum*, however, alters the pattern, extending northward as it does for a total length of 75 m.

It is possible then to conclude that the probable width of a Doclea *insula* was 59 m and that this dimension was a constant also in its length, thereby determining a layout of square blocks or of rectangular ones, if the NW/SE sides are doubled up (Plate 3). The *insula* was therefore designed on a unit of measurement of exactly 200 feet, with a foot equating to 0.295 m (Tab. 2). In this case the 'foot' of Doclea could correspond with that probably used in the planning of Aquileia which, according to recent studies, was organized in *insulae* 240 feet wide (2 *actus*) and 480 long (MUZZIOLI 2004; GHIOTTO 2013 with previous bibliography). Moreover, the probable quadrangular form of the *insulae* finds a correspondence in some Roman cities of the Italian peninsula. With the exception of few examples dated to the 3rd to 2nd centuries BC, such as Placentia⁴ or Interamna Nahars (Placentia: PAGLIANI 1991, 42-43; DALL'AGLIO *et al.* 2006; Interamnina Nahars: MANZOLI 1997, 83-90), the square shape of the *insulae* seems to be spread abroad especially in the first Augustan age, with the introduction of a basic module more compatible with new standard models of private and public buildings (CONVENTI 2004; SOMMELLA 2018, 50).

The square form of the urban layout is adopted in Florentia, with blocks of modular *domus*, in Venafrum, which used an almost square module of

⁴ The regular layout of Placentia, however, appears to be dated after the Civil War (SOMMELLA 2018, 53).

70x75 m and in Asculum (Florentia: SOMMELLA 1988, 168; MIRANDOLA 1999; MAFFEI 2000, 9-25; Venafrum: SOMMELLA 1988, 172; CONVENTI 2004, 60-62; Asculum: SOMMELLA 1988, 175; CONVENTI 2004, 135-137). This type of extremely rational plan, very often based on a module of 2 *actus*, is common especially in the cities of northern Italy such as Verona, Parma⁵ and Alba Pompeia and in new cities deriving from military camps (*castra*) such as Aosta (with its large roads and rectangular *insulae*) and Turin (Verona: CAVALIERI MANASSE, BRUNO 2003; Parma: SOMMELLA 1988, 79, and 2018; Alba Pompeia: FILIPPI 1997, 57-60; MARINI CALVANI 2000; Aosta and Turin: SOMMELLA 1988, 171, and 2018; PANERO 2000, 153-170).

A module of 2 *actus* could have been used also in Doclea, as the *forum* length (75 m) and the width of an *insula* in the eastern sector suggest (Plate 3). A further comparison is the *municipium* of Libarna, near Serravalle Scrivia, which has a regular layout set parallel to the river and is organized in regular blocks of almost square shape, but of different sizes (58.50x60 m; 50x60 m) with a square *forum* in a central position. The main axes of Libarna measure from 9 m (*decumanus maximus*) to 12 m in width (*cardo maximus*), while the secondary roads are about 8 m wide (PANERO 2000, 115-131; ROSSI *et al.* 2008).

A final observation regards the chronological phasing of the city in relation to the urban planning. Some buildings, while maintaining the same orientation, underwent extensions and changes that did not respect the limits of the *insulae*, with the consequent invasion of the space intended for the roads (Fig. 6, red lines). This situation can be observed along the eastern side of the large *thermae*, where some rooms were added to the original building (Fig. 6, A). Furthermore, according to STICOTTI's map (1913, fig. 52, Plate 1), a group of service rooms, latrines and tanks, no longer visible, extended from the SW corner, beyond the presumed limit of the *cardo*. Other examples of occupation of the road-space could first be the one, already described, of the enclosure of the private temple (Fig. 6, C) and the one, very evident, of some rooms of the private house (T room on STICOTTI 1913, fig. 37) that invaded the *decumanus maximus* (Fig. 6, B).

F.C., P.ME.

FRANCESCA COLOSI, PASQUALE MEROLA
Istituto per le Tecnologie Applicate ai Beni Culturali
CNR – Roma
francesca.colosi@cnr.it, pasquale.merola@cnr.it

PAOLA MOSCATI
Istituto di Studi sul Mediterraneo Antico
CNR – Roma
paola.moscatti@cnr.it

⁵ In Parma the square *insulae* of Augustan age probably derive from a subdivision of original rectangular blocks (SOMMELLA 2018, 57).

REFERENCES

- BARATIN L., CHECCUCCI G., PELOSO D., Doclea, tecniche a confronto per la documentazione: utilizzo di foto aeree storiche ed immagini da satellite ad alta risoluzione, in G. CERAUDO (ed.), *100 anni di Archeologia aerea in Italia*, «Archeologia Aerea», 4, 2010, 289-294.
- BERTACCHI L. 2003, *Nuova pianta archeologica di Aquileia*, Aquileia, Edizioni del Confine.
- BIALLO G. 2006, *Introduzione ai Sistemi Informativi Geografici*, Roma, I Quaderni MondoGis.
- CAMPEDELLI A., DUBBINI M., MONICA M. 2017, *Geo-archaeological study of the territory of Burnum's Roman site (Croatia) through LANDSAT multi-temporal satellite images and high resolution GeoEye*, in S. GARAGNANI, A. GAUCCI (eds.), *Knowledge, Analysis and Innovative Methods for the Study and the Dissemination of Ancient Urban Areas, Proceedings of the KAINUA 2017 International Conference (Bologna 2017)*, «Archeologia e Calcolatori», 28.2, 277-290 (<https://doi.org/10.19282/AC.28.2.2017.21>).
- CAVALIERI MANASSE G., BRUNO B. 2003, *Edilizia abitativa a Verona*, in J. ORTALLI, M. HEINZELMANN (eds.), *Abitare in città. La Cisalpina tra impero e medioevo*, Palilia, 12, Berlin, DAIRom, 47-64.
- CIRELLI E. 2016, *Applicazioni GIS all'archeologia urbana: il caso di Ravenna*, «Archeologia e Calcolatori», 27, 209-226.
- COLOSI F., GABRIELLI R., LAZZARI A. 2006, *Il sistema GPS per il rilevamento del territorio: potenzialità e limiti dei diversi metodi di acquisizione*, in S. CAMPANA, R. FRANCOVICH (eds.), *Laser scanner e GPS. Paesaggi archeologici e tecnologie digitali*, Firenze, All'Insegna del Giglio, 187-200.
- CONVENTI M. 2004, *Città romane di fondazione*, Roma, L'Erma di Bretschneider.
- DALL'AGLIO P.L., MARCHETTI G., FERRARI K., DAGUATI M. 2007, *Geomorfologia e città di fondazione in pianura padana: il caso di Placentia*, in L. BRECCIAROLI TABORELLI (ed.), *Forme e tempi dell'urbanizzazione nella Cisalpina (II secolo a.C.-I sec. d.C.)*, *Atti delle Giornate di Studio (Torino 2006)*, Firenze, All'Insegna del Giglio, 91-97.
- DE MARINIS G., FABRINI G.M., PACI G., PERNA R., SILVESTRINI M. (eds.) 2012, *I processi evolutivi della città in area adriatica*, BAR International Series 2419, Oxford, BAR Publishing.
- FILIPPI F. (ed.) 1997, *Alba Pompeia. Archeologia della città dalla fondazione alla tarda antichità*, Quaderni della Soprintendenza archeologica del Piemonte 6, Torino, Famija Albèisa.
- GABRIELLI R. 2001, *Introduzione all'uso del GPS in archeologia*, in S. CAMPANA, M. FORTE (eds.), *Remote Sensing in Archaeology. XI Ciclo di Lezioni sulla Ricerca applicata in Archeologia (Certosa di Pontignano 1999)*, Firenze, All'Insegna del Giglio, 329-354.
- GELICHI S., NEGRELLI C., LEARDI S., SABBIONESI L., BELCARI R. 2012, *Doclea alla fine dell'antichità. Studi e ricerche per la storia di una città abbandonata della Prevalitanian/Duklja na kraju antičkog doba. Studije i istraživanja istorije jednog napuštenog grada Prevalitanije*, «Nova Antička Duklja/New Antique Doclea», 3, 10-40.
- GHIOTTO A.R. 2013, *Nuovi dati e nuove ipotesi sulla pianificazione urbana di Aquileia*, «Rivista di Archeologia», 37, 99-114.
- GOMARASCA 2009, *Basic of Geomatics*, Netherlands, Springer.
- LIU J.G., MASON P.J. 2016, *Image Processing and GIS for Remote Sensing: Techniques and Applications*, Chichester (UK), Wiley.
- MANZOLI S. 1997, *Terni Interamna: note sulla topografia e sull'urbanistica della città antica*, in L. QUILICI, S. QUILICI GIGLI (eds.), *Architettura e pianificazione urbana nell'Italia antica*, Atlante Tematico di Topografia Antica, 6, Roma, L'Erma di Bretschneider, 83-90.
- MARINI CALVANI M. 2000, *Parma*, in M. MARINI CALVANI (ed.), *Aemilia. La cultura romana in Emilia Romagna dal III secolo a.C. all'età costantiniana*, Venezia, Marsilio Editore, 395-404.
- MIRANDOLA R. 1999, *Firenze*, in M.C. FAVILLA, R. MIRANDOLA (eds.), *Archeologia urbana in Toscana. La città altomedievale*, Documenti di archeologia 17, Mantova, Editrice S.A.P., 59-73.

- MAFFEI G.L. 2003, *Città di fondazione romana. Lettura di impianti urbani pianificati*, Firenze, Alinea Editrice.
- MOSCATI P. in press, *ICT challenges, European policies and archaeological research projects in the Adriatic Sea area*, in L. ALBERTI (ed.), *Interconnections in the Mediterranean through time: Montenegro and Italy, Proceedings of the Bilateral Round Table held at the University of Montenegro (Podgorica)*, Roma, CNR Edizioni.
- MUNRO J.A.R., ANDERSON W.C.F., MILNE J.G., HAVERFIELD F. 1896, *On the Roman Town of Doclea in Montenegro*, «*Archaeologia*», 55, 33-92.
- MUZZIOLI M.P. 2004, *Aspetti della pianificazione della colonia di Aquileia*, in C. ZACCARIA (ed.) *Aquileia dalle origini alla costituzione del ducato longobardo. Topografia-urbanistica-edilizia pubblica*, Atti della 37^a Settimana di studi aquileiesi, Trieste, Editreg, 121-150.
- PAGLIANI M.L. 1991, *Piacenza. Forma e Urbanistica*, Roma, L'Erma di Bretschneider.
- PANERO E. 2000, *La città romana in Piemonte. Realtà e simbologia della Forma Urbis nella Cisalpina occidentale*, Archeologia e storia, 1, Bra, Gribaudo.
- PETT L. 2010, *Duklja, Izveštaj sa geofizičkih istraživanja, Oktobar 2007/Doclea, Geophysical survey report, October 2007*, «*Nova Antička Duklja/New Antique Doclea*», 1, 7-44.
- RINALDI TUFİ S. 2004, *Le province europee dell'Impero romano. Le province danubiano-balcaniche. Illyricum – Dalmatia*, in *Il Mondo dell'Archeologia*, Roma, Istituto della Enciclopedia Italiana Treccani.
- RINALDI TUFİ S. 2012, *Doclea, città romana del Montenegro*, in G. DE MARINIS, G.M. FABRINI, G. PACI, R. PERNA, M. SILVESTRINI (eds.), *I processi evolutivi della città in area adriatica*, BAR International Series 2419, Oxford, BAR Publishing, 477-490.
- RINALDI TUFİ S., BARATIN L., PELOSO D. 2010, *Valorizzazione del sito archeologico di Doclea, città romana in Montenegro*, «*Bollettino di archeologia online*», 1, 71-77.
- ROSSI G., VENTURINO GAMBARI M., ZANDA E. 2008, *La riscoperta di Libarna. Dall'antiquaria alla ricerca archeologica*, Pavia, De Ferrari.
- SOMMELLA P. 1988, *L'urbanistica romana*, Italia antica I, 4, Roma, Jouvaince Società Editoriale.
- SOMMELLA P. 2018, *Città romane della Cisalpina. Esempi d'integrazione culturale*, in *Lectio Brevis, anno accademico 2016-2017*, Accademia Nazionale dei Lincei, Memorie della Classe di Scienze Morali Storiche e Filologiche, serie 9, vol. 38, fasc. 2, Roma, Bardi Edizioni, 41-70.
- STICOTTI P. 1913, *Die römische Stadt Doclea in Montenegro*, Schriften der Balkankommission Antiquarische Abteilung Heft 6, Wien, In Kommission bei A. Hölder.
- ŽIVANOVIĆ M., STAMENKOVIĆ A. 2012, *O gradskim bedemima antičke Dokleje/On city walls of ancient Doclea*, «*Nova Antička Duklja/New Antique Doclea*», 3, 115-145.

ABSTRACT

The paper presents the study of Doclea by remote sensing (satellite, aerial photos, drone) and the first results of the topographic survey conducted within the urban walls. The analysis of the images has highlighted buried structures that follow the same alignment as the walls visible above ground. The same anomalies are detected on the geophysical maps. The territorial survey, conducted with the aid of a differential GPS to position the emerging structures, has allowed one to identify numerous ancient structures, sometimes preserved to some height, which have the same orientation of the buildings of the *forum* and a stone paved road corresponding to a *cardo* of the city. Analysing the archaeological findings, the geophysical results and the measurements of the principal monuments and the roads, a hypothetical reconstruction of the Doclea urban plan is presented, which, naturally, can only be verified with further research and with excavation on the spot.

GROUND PENETRATING RADAR SURVEY

1. INTRODUCTION

It is now widely accepted that archaeological sites are increasingly threatened and non-renewable cultural resources (CAMPANA, PIRO 2009). The prudent management of our cultural heritage calls for the non-invasive assessment of sites not under threat, the evaluation of sites in areas open to change, and the identification and recovery of information where sites are to be destroyed. Archaeological sites, for example, represent a particular environment with a high monumental, artistic, and historical value whose protection needs to reconcile two fundamental, if different, requirements: on the one hand is the preservation of ancient history and, on the other hand, the requirements of urban growth and conversion.

In urban planning, such sites should be viewed as areas worthy of revitalization, improvement and regeneration, with planning and development undertaken for both socio-economic and touristic purposes. Doclea is an example of a complex environment in which the overlapping of architecture from different chronological phases down the centuries creates critical problems of conservation and management of cultural heritage.

2. THE ROLE OF HIGH-RESOLUTION GEOPHYSICS

In a context like this, high-resolution geophysics can play a key role. Generally, such investigations are carried out using different 2D and 3D tomographic approaches, as well as different energy sources: sonic and ultrasonic waves, electromagnetic (inductive and impulsive) sources and electric potential fields. The acquired tridimensional matrix of data, properly treated using physical and mathematical algorithms of data processing, provides a detailed 3D screening of the hidden and invisible features of the objects and environments in the area investigated. The set of data produced allows archaeologists, scientists and experts in enhancement of cultural heritage to possess a comprehensive model that can be used in excavation planning, restoration projects and reconstructive processes, or can be visualized in interactive modes within a museum. The reconstructed models enhance the perception of the historical value of a place.

The application of geophysical methods for archaeological prospection and cultural heritage dates back to the early 1950s. The main techniques used for diagnostics of cultural heritage are: the magnetic-field method, gravitational surveying, electromagnetic methods, Ground Penetrating Radar, Electrical Resistivity Tomography (ERT), and the Self-Potential (SP) method

(WITTEN 2006; CAMPANA, PIRO 2009; SCOLLAR *et al.* 2009; SCHMIDT *et al.* 2015; COZZOLINO *et al.* 2018).

The evaluation of the appropriate survey methodology to be used is a very important factor that, if misjudged, can seriously undermine the success of research for archaeological purposes. This choice depends on many factors: geological, economic, logistic and purely geophysical ones. A decision is principally effected by considering the purpose of the exploration and by the dissimilarities possessed by the geophysical properties of the expected features in the subsoil that through the stronger or weaker anomalies recovered will define the supposed structure. The matters on which geophysics are employed may concern tombs, foundations of buildings, furnaces, canals, trenches, etc. or be connected with the resolution of problems related to the restoration of buildings of historical interest, such as in cases where it is necessary to assess the extent of fractures or water infiltration in the walls. Depending on the type of problem, the environment in which one is working and the type of instrumentation to be used, the methodology that will give the best results is selected.

3. THE GPR AT DOCLEA

Taking into account the probable type, dimensions and depth of the submerged structures and the geological characterization of the soil, Ground Penetrating Radar was chosen in the case of Doclea (Fig. 1).

GPR is one of the methods that have received a broader consensus and approval among archaeologists (CONYERS, GOODMAN 1997) because of its capability to acquire data fast and to produce high resolution maps of structures located at depths ranging from a few tens of centimeters to a few meters. The advantages of GPR surveying are documented in many works dealing with applications in locating subsurface archaeological structures (GOODMAN *et al.* 1993; MALAGODI *et al.* 1996; BASILE *et al.* 2000; PIPAN *et al.* 2001; COZZOLINO *et al.* 2018, 105-110, 125-138) and also to image large scale archaeological features (NISHIMURA *et al.* 2000; NEUBAUER *et al.* 2002; PIRO *et al.* 2001, 2003; LINFORD 2004; COZZOLINO *et al.* 2018, 151-168). To investigate the subsoil, this method uses electromagnetic waves that are dispersed into the ground through a sending antenna placed on the surface; when they reach a discontinuity, they are partly transmitted (continuing their path through the material) and partly reflected back towards the surface where they are detected by a receiving antenna. The pulses received by the antenna in reception mode are passed to a central unit that converts them into digital format and stores them in an internal memory. The reflections mentioned are generally caused by changes in the electrical properties of the soil, changes in its water content or lithological variations. From the measurement of the travelling times of the pulses, if the propagation velocity in the subsoil is known,



Fig. 1 – IDS RIS-K2 Georadar during data acquisition.

the depth they reached may be estimated accurately too. The performance of the system is influenced by the electromagnetic properties of the medium they are used on: this determines the depth the survey can reach, which varies, therefore, from point to point.

Since 2016, an extensive survey has been conducted at the archaeological site of Doclea in the areas between the *forum*, the *basilica*, the *Capitolium*, the *thermae* and the walls of the city, around the eastern medieval churches, in the southern part of the temple of Dea Roma and of the private houses. GPR surveys have partly overlapped the areas between the *Capitolium* and the N walls investigated in 2007 through magnetometry, carried out as a joint research project between the British School at Rome (BSR) and the Archaeological Prospection Services of Southampton (APSS) (PETT 2010, 19). The results obtained in the remaining areas investigated in this research represent new and unpublished data.

An IDS RIS-K2 Georadar, equipped with a multi-frequency antenna TRMF (600-200 MHz), has been used for data acquisition. All radar reflections were recorded digitally in the field as 16 bit data and 512 samples per radar scan. The spacing between parallel profiles at the site was 0.5 m and they were collected alternatively in opposite directions with angles of 90 degrees to the survey grids. Radar reflections on each line were recorded at 25 scan s^{-1} (1 scan approximately corresponds to 0.025 m).

Standard bi-dimensional radargrams relative to single transects were processed through the GPR-SLICE 7.0 software. Band pass filters, background removal and Gain Control were applied in order to remove high and low

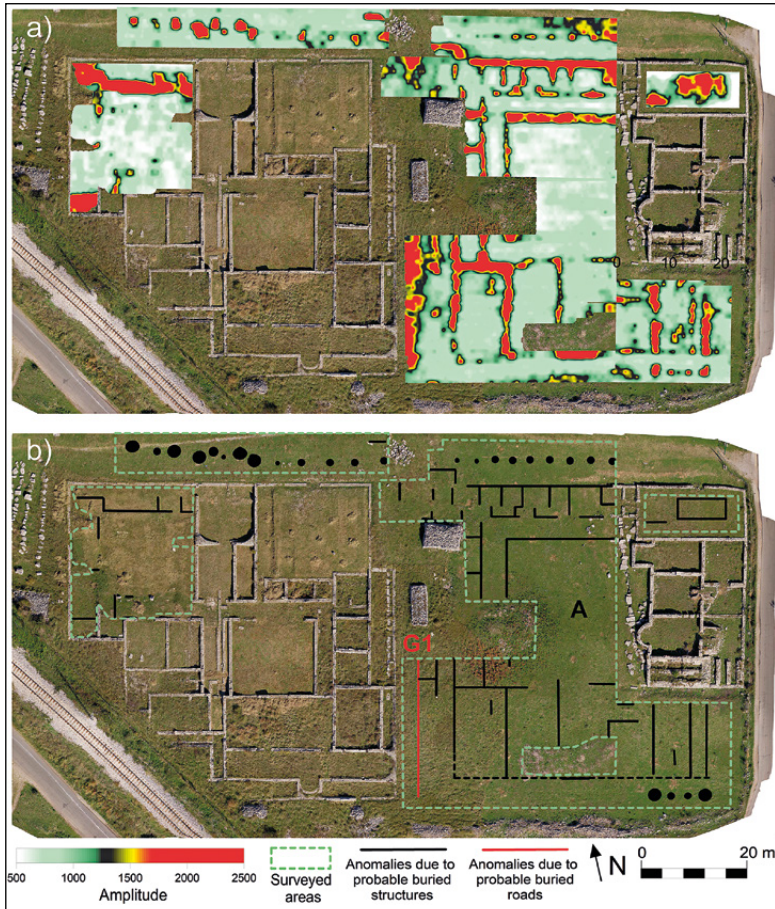


Fig. 2 – GPR results between the *thermae*: time slice relative to the time window 14-18 ns (about 0.7-1.4 m in depth), overlapped on the photogrammetric image (a) and identification of anomalies (b).

frequency anomalies that occurred during the data acquisition, normalize the amplification and remove reflections generated by noise due to the different signal attenuation (CONYERS, GOODMAN 1997; GOODMAN, PIRO 2013).

Thus, using a sequence of parallel lines, a three-dimensional matrix of averaged square wave amplitudes of the return reflection was generated and time-slices were realized for various time windows. In the examined context, considering a conductive soil with a velocity v with which the wave spread into the materials equal to 0,1 m/ns, the depth h of the reflectors can be approximately derived using the equation $h = vt/2$ (where t is the time in

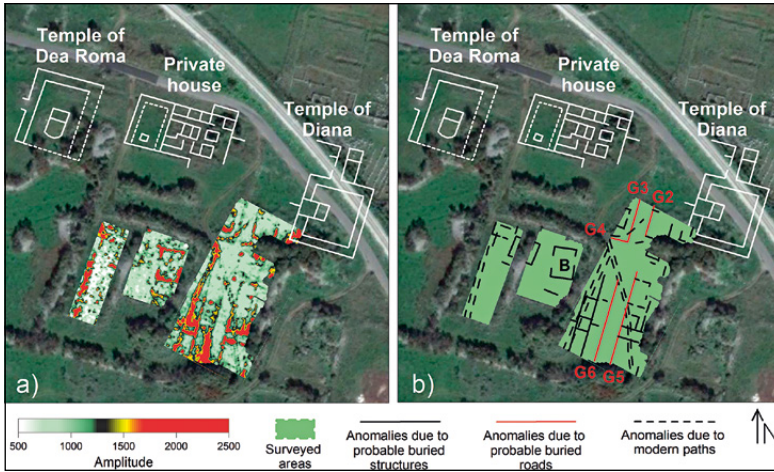


Fig. 3 – GPR results in the southern part of the private houses: time slice relative to the time window 14-18 ns (about 0,7-1,4 m in depth), overlapped on the photogrammetric image (a) and identification of anomalies (b).

which the electromagnetic wave fulfils the path transmitter antenna-discontinuity-receiver antenna). Data was then gridded using a kriging routine and a radius of interpolation equal to 0.75 m.

4. GPR SURVEY RESULTS

Plate 4a presents the results of GPR investigations carried out around the *thermae*, the *Capitolium*, in the space in the southern part of the private house and in the southern sector of the northern walls, relative to the time window 14-18 ns (about 0.7-1.4 m in depth), overlapped on the satellite image of Google Earth™. The anomalies seen in these representations depict the spatial distribution of the amplitudes of the reflections at specific depths within the grid. Within the slice, low amplitude variations express small reflections from the subsurface and, therefore, indicate the presence of homogeneous material. High amplitudes denote significant discontinuities in the ground and evidence the presence of probable buried objects.

In Plate 4b, an interpretation of anomalies is attempted and the plan of probable inner walls is given. In particular, both different rooms around the *thermae* and an open space (a probable courtyard, signed with letter A) between the two thermal baths are well imaged, as well as some hypothetical bases of columns (black circles equally spaced) at the southern border of the *decumanus* (Fig. 2). The G1 anomaly (Plate 3) could be a border of the *cardo* that crosses the *thermae*. In the southern part of the private houses, even if

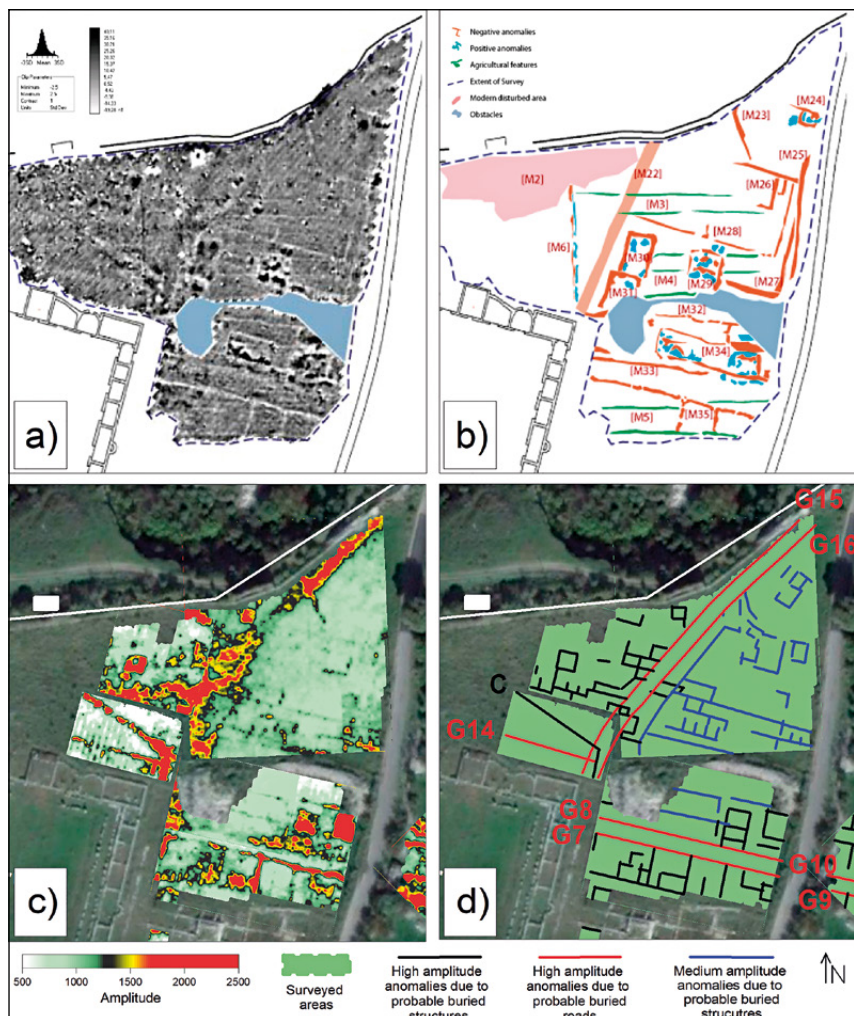


Fig. 4 – Comparison between GPR results and magnetometry results (PETT 2010) among the *Capitolium* and the northern walls: a) Magnetometry results greyscale (PETT 2010, 25), b) Magnetometry results interpretation (PETT 2010, 29), c) GPR results, d) GPR interpretation.

there are some disturbance due to the presence of modern paths (signed with dotted black lines), interesting anomalies are shown. In detail, the investigations evidence the presence of traces of structures (Fig. 2, Plate 3 and Plate 4b) that overlap the probable roads (indicated with red lines in Plate 4b). They are oriented according to the urban scheme, with the exception of the

central rectangular anomaly, of dimension 18×12 m (indicated by the letter B in Fig. 3 and Plate 4b).

Different squared maxima of amplitude are associated with linear anomalies (in red lines, G2-G6 anomalies in Plate 3 and Plate 4b), whose projection into the northern sector of the city cuts the *decumanus* perpendicularly: it can thus be attributed to a *cardo* and gives important information on the division of the city into *insulae*. Other traces of the roads are visible in the NE part of the *Capitolium* (G7-G16 anomalies in Plate 3 and Plate 4b). Finally, some irregularities in the urban scheme stand out: in the northern sector, the road curves towards the N gate (G15 and G16 anomalies in Plate 3 and Plate 4b), departing from the regular pattern visible in the S (G9-G13 anomalies in Plate 3 and Plate 4b); to the W of the churches, the pattern of streets identified gives a block width of 75 m.

The results of the GPR investigations are perfectly in line with the results of the previous magnetometric surveys between the *Capitolium* and the N walls even if, considering medium amplitude anomalies, it is now possible to recognize some additional elements as shown in Fig. 4c, d and Plate 4b. A noticeable difference was found in the definition of the continuation of the road that flanks the *forum* to the E: while the magnetometry detects an indistinct positive feature that runs from the SE corner of the *forum* in a NNE direction¹, GPR survey, to the analysed depth, highlights an anomaly initially oriented in the direction NNE but then curving to flank the N walls (G15 and G16 anomalies in Plate 3, Plate 4b and Fig. 4). In addition, the C anomaly, a probable piece of buried water pipeline, and the G14 anomaly (Fig. 4c-d) are slightly visible in the magnetometry results (Fig. 4a, PETT 2010, 25) as negative anomalies even if they are not interpreted in Fig. 4b (PETT 2010, p. 29).

Work is still proceeding: the main objective is to produce a full map of the hidden structures inside the walls of the city. Such would be invaluable in guiding archaeological excavation and in assisting in the valorisation of the site.

MARILENA COZZOLINO

Istituto per le Tecnologie Applicate ai Beni Culturali

CNR – Roma

marilena.cozzolino@itabc.cnr.it

VINCENZO GENTILE

vincenzo.gentile86@gmail.com

¹ «There is a broad and indistinct positive feature [M22] that runs from the SE corner of the forum in a N-NE direction. It is possible that this too represents an older boundary marker. On the 1907 Sciotti Map there is a line marked in this location, which could possibly be a field boundary. Alternatively, the alignment of this anomaly supports the theory that this could represent a continuation of the street that runs NNE alongside the forum itself» (PETT 2010, 24).

REFERENCES

- BASILE V., CARROZZO M.T., NEGRI S., NUZZO L., QUARTA T., VILLANI A.V. 2000, *A ground-penetrating radar survey for archaeological investigations in an urban area (Lecce, Italy)*, «Journal of Applied Geophysics», 44, 15-32.
- CAMPANA S., PIRO S. (eds.) 2009, *Seeing the Unseen. Geophysics and Landscape Archaeology*, London, CRC Press.
- CONYERS L.B., GOODMAN D. 1997, *Ground Penetrating Radar: An Introduction for Archaeologists*, Walnut Creek, CA, AltaMira Press.
- COZZOLINO M., DI GIOVANNI E., MAURIELLO P., PIRO S., ZAMUNER D. 2018, *Geophysical Methods for Cultural Heritage Management*, Chan, Springer.
- GOODMAN D., NISHIMURA Y. 1993, *A Ground-radar view of Japanese burial mounds*, «Antiquity», 67, 349-354.
- GOODMAN D., PIRO S. 2013, *GPR Remote Sensing in Archaeology*, Berlin, Springer.
- MALAGODI S., ORLANDO L., PIRO S., ROSSO F. 1996, *Location of archaeological structures using GPR method. 3-D data acquisition and radar signal processing*, «Archaeological Prospection», 3, 13-23.
- NEUBAUER W., EDER-HINTERLEITNER A., SEREN S., MELICHAR P. 2002, *Georadar in the Roman Civil town Carnuntum, Austria. An approach for archaeological interpretation of GPR data*, «Archaeological Prospection», 9, 135-156.
- NISHIMURA Y., GOODMAN D. 2000, *Ground-penetrating radar survey at Wroxeter*, «Archaeological Prospection», 7 (2), 101-105.
- PETT L. 2010, *Duklja, Izveštaj sa geofizičkih istraživanja, Oktobar 2007/Doclea, Geophysical survey report, October 2007*, «Nova Antička Duklja/New Antique Doclea», 1, 7-44.
- PIPAN M., BARADELLO L., FORTE E., FINETTI I. 2001, *Ground Penetrating radar study of Iron Age tombs in South Eastern Kazakhstan*, «Archaeological Prospection», 8 (3), 141-155.
- PIRO S., GOODMAN D., NISHIMURA Y. 2003, *The study and characterisation of Emperor Traiano's Villa (Altopiani di Arcinazzo – Roma) using high-resolution integrated geophysical surveys*, «Archaeological Prospection», 10, 1-25.
- SCOLLAR I., TABBAGH A., HESSE A., HERZOG I. 2009, *Archaeological Prospecting and Remote Sensing*, Cambridge, Cambridge University Press.
- SCHMIDT A., LINFORD P., LINFORD N., GAFFNEY C., DAVID A. (eds.) 2015, *EAC Guidelines for the Use of Geophysics in Archaeology*, Budapest, Archaeolingua Press.
- WITTEN A.J. 2006, *Handbook of Geophysics and Archaeology*, London, Equinox Pub.

ABSTRACT

Since 2016, an extensive survey has been conducted at the archaeological site of Doclea in the areas between the *forum*, the *basilica*, the *Capitolium*, the *thermae* and the walls of the city, as well as around the eastern medieval churches, and in the S part of the temple of Dea Roma and of the private house. GPR results have produced a detailed and extensive plan of hidden structures (walls, roads, ditches and gullies) inside the walls of the city. The knowledge of these features is of great worth in promoting archaeological excavations and projects of valorisation for the site.

THE MAIN PUBLIC BUILDINGS OF DOCLEA: ARCHIVAL, ARCHAEOLOGICAL AND ARCHITECTURAL RESEARCH

1. STATUS OF DOCUMENTATION AND METHODOLOGICAL ISSUES

In over 128 years from the beginning of systematic archaeological explorations of Doclea only slightly more than 20% of the city total area (25 ha) has been excavated. Furthermore, the main buildings are in a poor state of conservation and maintain very few traces of the floor and wall decoration. Not even one building has been precisely dated. Moreover, almost no architectural fragment remains *in situ*. The main architectural elements recovered in the central area of the city were positioned in the *forum*, without reference to their provenience (JOVIĆEVIĆ 2010). This location and other nearby areas accommodate just over 200 such fragments, which make a reconstruction of the main buildings considerably more difficult.

Moreover, a large number of architectural fragments were taken away from the site, destroyed or built into surrounding private houses. Due to the insufficient attention paid to the situation by State institutions and to the consequent devastation wreaked on Doclea, the site nowadays is poorer than it was back in the late 19th and the early 20th centuries. For that reason, it was of fundamental importance to find documents in the archives and museums in Austria, France, Italy, Great Britain, Russia, the Czech Republic, Serbia, Croatia and Montenegro (KOPRIVICA 2013, 1-3). These researches were aimed at finding the documents of the earlier explorers of Doclea, as well as documentary photographs that – probably due to the earlier focuses of primary interest – did not find a place in their published works (Fig. 1). Inevitably, the documentation of the archaeological exploration of Doclea, carried out under different methods, is not of a homogeneous quality: it is imprecise for the most part and very often preserved without any photographic documentation and sketches.

From an archaeological perspective, first there was carried out a bibliographical research. It was thus possible to observe that until now and in all the main works concerning Doclea, the building typologies (*forum*, *basilica*, temples, baths, *domus*) have been analysed in a generic way, mainly by simply comparing their plans with others. However, and especially in the absence of excavation data, an analysis of the existing structures must combine archaeological and architectural methods, according to the most modern theories of the so-called archaeology of architecture, if one wishes to appreciate the Roman buildings of the city. Thus we employ archaeological methodology to



Fig. 1 – Doclea, *forum* and *basilica* (photo by Josef Wünnch, 1890, Archaeological Museum, Split).

investigate the history of the monuments and their architectural evolution over time, analysing the structural features that mark the different building phases.

We started by applying these methods of analysis to the monuments in the *forum* area and in the main *thermae*, where we collected a series of data that we are now processing. We are also documenting, classifying and studying the architectural elements scattered across the site, trying to work out their locations and functions, with the ultimate goal of producing a 3D reconstruction of the main buildings.

T.K., C.S.

2. THE PUBLIC BUILDINGS OF DOCLEA IN THE CONTEXT OF ROMAN ARCHITECTURE: A GENERAL OVERVIEW

The appearance of Roman-type buildings is generally considered evidence of the ‘Romanization’ process. Although this concept is widely discussed today (REVELL 2014), it cannot be denied that the Roman presence in a territory is recognized nowadays above all by the architecture: the different buildings represent a precise style of life and of political-social organization, which was adopted by local communities from the age of Augustus onwards, with some regional characteristics. A Roman city is characterized by its administrative and cult buildings, by hydraulic, hygienic and commercial structures, and by entertainment buildings (MACDONALD 1965; WARD-PERKINS 1974; GROS 1996; ULRICH, QUENEMOEN 2014; MARCONI 2015). In Doclea, the last

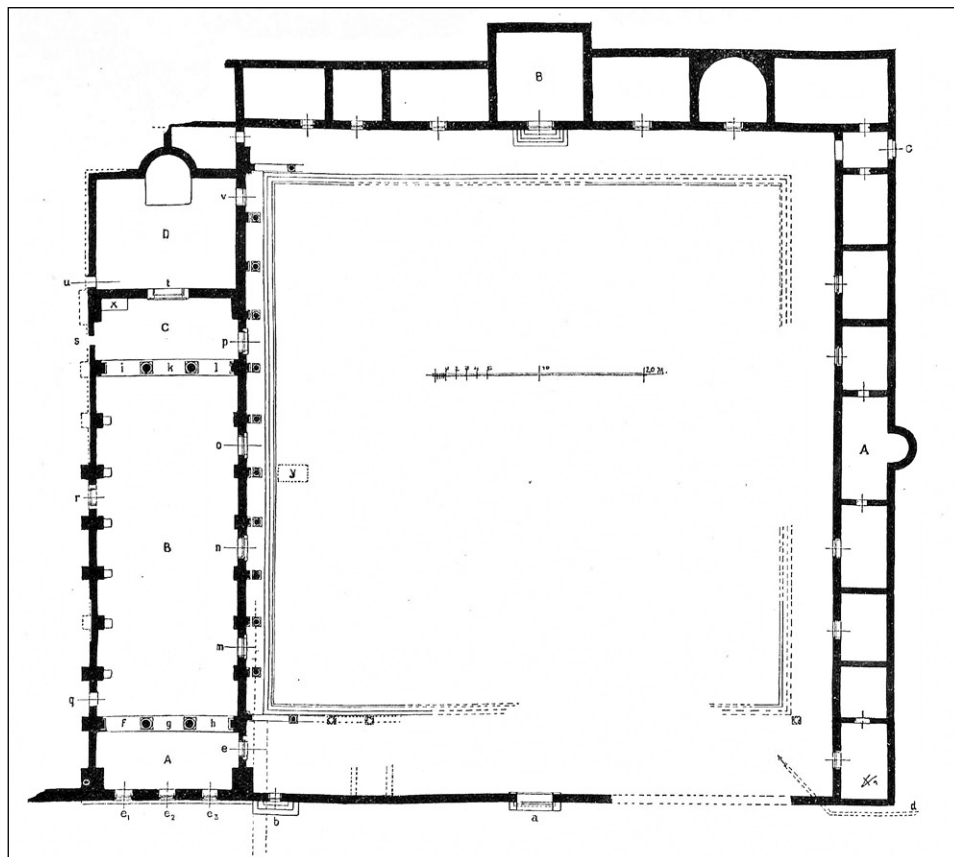


Fig. 2 – Doclea, plan of the *forum* (after STICOTTI 1913, fig. 57).

group have not been identified so far, but they certainly had to exist somewhere (DRAŠKOVIĆ 2013). It is of great value to analyse the main buildings of Doclea as an expression of a typically Roman architectural culture, but keeping in mind the possibility of identifying local or regional characters or features referring to this specific area of the Empire. To be complete, such a type of analysis would have to take into account the archival data and the elements arising from the direct archaeological and architectural analysis of the structures. In this phase of our research, however, we present the results of a bibliographical survey, on which the subsequent observations will be based.

The main excavated buildings of Doclea are located in the western sector of the city, along the WE road identified as the *decumanus* (Plate 2). On the S side of the road there are the so-called temple of the goddess Roma, a



Fig. 3 – Doclea, *basilica* and *forum* (March 2017).

private house, the so-called temple of Diana, a large thermal complex and a smaller bath-system. On the N side, there are the *forum* with the *basilica*, and another temple, identified as the *Capitolium*.

Our analysis starts with the *forum*, the most representative monumental complex of a Roman city (GROS 1996, 207-234). Doclea's *forum* is a large paved area (Fig. 2), which is square in shape and surrounded by porticoes and buildings (total area 59×75 m), except on the S side, where the main street passed (WILKES 1969, 371; STICOTTI 2013, 106-138). The *forum* was dedicated by M. *Flavius Fronto* and his wife *Flavia Tertulla*, in memory of their son M. *Flavius Balbinus*, as indicated in an inscription; according to another inscription – now lost – the Doclean *municipium* council erected an equestrian statue of the young M. F. *Balbinus*. In Sticotti's opinion, the statue might have been located in front of the *basilica*'s eastern facade, immediately beside the stairway; a pedestal there was covered by inscriptions referring to the boy and reiterating a more detailed text than that inscribed in the architrave on the *basilica* (STICOTTI 1913, 133-135; STEVOVIĆ 2014, 37).

On the N side of the *forum* square, there are rooms of different sizes: in the middle is a *podium* 8 m square and 1.5 m high whose access steps are not preserved. A row of rooms is situated also on the E side, while on the W

there is a large *basilica*: it is divided into two parts – the larger is rectangular, 53×16 m, with pairs of columns that demarcated the nave on the two short sides, and the smaller (10×16 m) lies to the N with an apse in the northern wall (Fig. 3).

The structure of the Doclea *forum* is quite original in the architecture of the Adriatic region. The better-known *fora*, such as those of Pula, Zara and Narona, all built in the Augustan age, have a rectangular shape (RINALDI TUFI 2012, 479). Nevertheless, a slightly squarer plan is attested in some smaller towns in Dalmatia like *Asseria* and *Aequum* in the second half of the 1st century AD (WILKES 1969, 368, fig. 18). This plan could have been inspired by military architecture, where an elongated hall usually occupies one of the sides of the area (GROS 1996, 226) and in particular by the *castra* that were built in large numbers during the intense military activity of the Flavian emperors (RINALDI TUFI 2012, 479). The type of square *forum* is well attested in this period in Britain as in the case of the *forum* in Silchester (FULFORD 1993). As in the *fora* of Britain, in Doclea too we note the absence of a real temple; only the square hall on the *podium* in the middle of the N side seems to have had a special function. According to S. Rinaldi Tufi, the *forum*'s plan finds a good parallel in Rome, in the architecture of the *Templum Pacis* (MENECHINI, SANTANGELI VALENZANI 2007, in particular 61-70; GAGIOTTI 2009), although there are many differences in size and organisation.

D. Srejić has also proposed for the *forum* of Doclea the function of a *Caesareum* or place of imperial cult (SREJOVIĆ 1967). Moreover, according to I. Stevović, intensive connections existed between this part of the Balkans and the eastern provinces, where quadrangular plans of *fora* are also present (STEOVIĆ 2014, 118). In particular, the *forum* of Cyrene shows interesting similarities with that of Doclea in the shape and in the placement of the *basilica* along one of the sides (TRIFOGLI 2014). Oriental elements can also be recognized in its architectural decoration. Accordingly, this theme of connections with the East deserves to be explored further.

It is also important to understand the function of the square hall on the *podium* that occupies a prominent position within the complex. According to some scholars, it may be the *curia* (WILKES 1969, 371). P. Sticotti already observed how small it was for this function (STICOTTI 1913, 111), and Ch. Balty believes rather that it should be interpreted as the main temple of the *forum*: the room would be the *cella* itself and the width of the portico act as the *pronaos* (BALTY 1981, 380). The temple could be compared with that of the Cambodunum-Kempton *forum* of the Flavian period, being of similar proportions and structure, with a wall that protrudes from the adjacent rooms (BALTY 1981, 380). The use of the portico as *pronaos* would once again recall the architecture of the *Templum Pacis*, even if of very different proportions. Moreover, the pattern of the *Templum Pacis* enjoyed considerable success

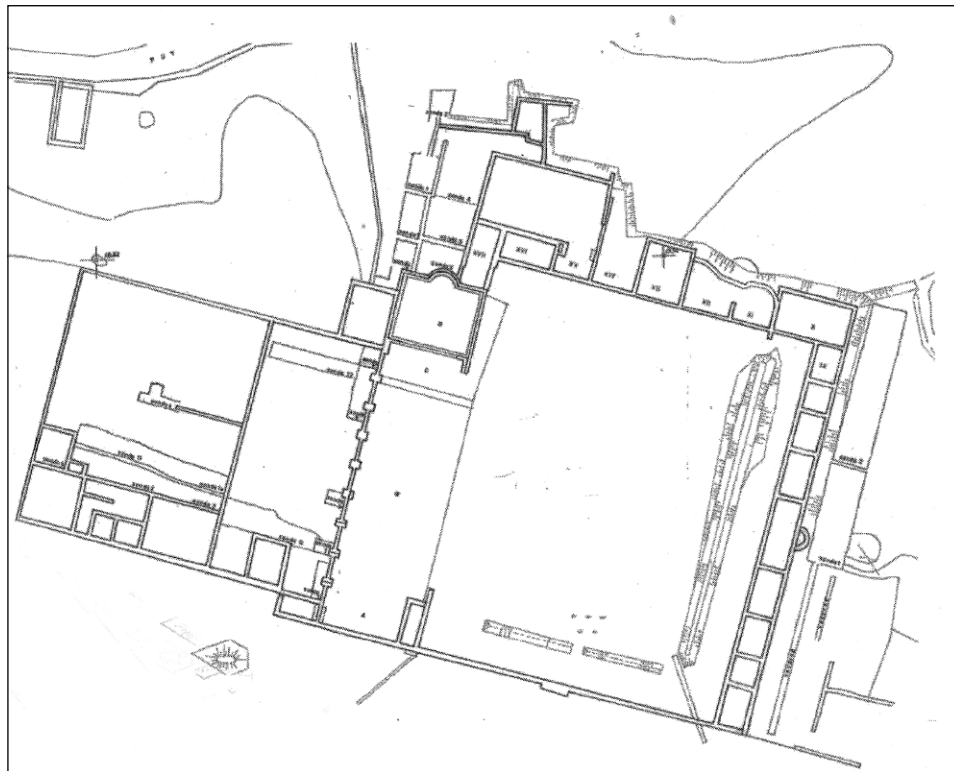


Fig. 4 – Doclea, plan of the *forum* and of the quadrangular building on the W side (Administration for the Protection of Cultural Properties, Cetinje, Doclea Excavations Documentation, 1998).

in the Roman world, for example being reflected in the provincial *forum* of Tarragona (MAR 1993). The *curia* at Doclea should rather be identified in the terminal part of the *basilica*, with its apse and originally with mosaic floors (BALTY 1981, 382). J.A.R. Munro considered that the *forum*'s eastward and northward rooms were shops, while P. Sticotti argued that they were *scholae*, *exedrae* or *tabernae* (MUNRO *et al.* 1896, 7; STICOTTI 1913, 109).

Ch. Balty dates the *basilica* in the 2nd century AD and precisely to the time of Trajan, on the basis of fragments of inscriptions (BALTY 1981, 382; STICOTTI 1913, 133-137 and 164-169). P. Sticotti noticed some similarities between the *basilica* and the peristyle of Diocletian's palace in Split (STICOTTI 1913, 121-122). According to I. Stevović, the building underwent renovations at the end of the 3rd century or the beginning of the 4th century, as did the baths as well (STEVOVIĆ 2014, 120). The analysis of the masonry structures confirms the remaking of the *basilica* and other rooms of the *forum*. The

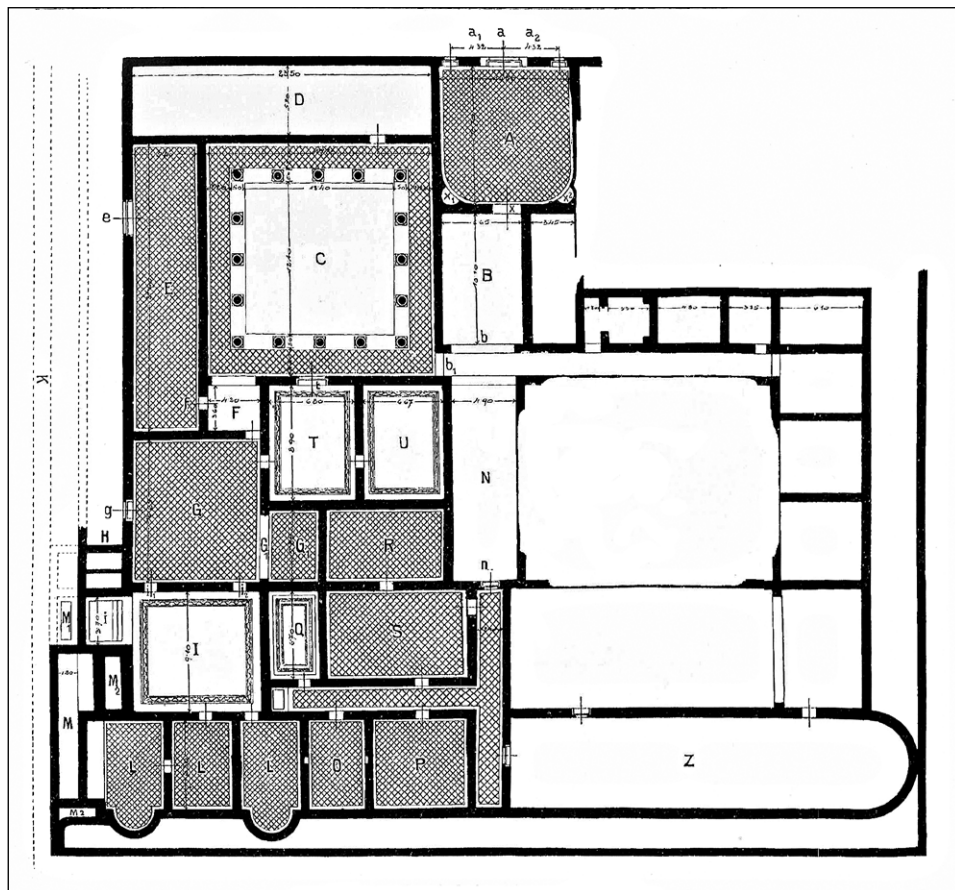


Fig. 5 – Doclea, plan of the large *thermae* (after STICOTTI 1913, fig. 52).

present study will investigate these aspects in detail in order to better understand these changes.

On the W side of the *forum*, there is a quadrangular structure, with some rooms in the S part. This is certainly built in a later phase: it could be interpreted as a market (GROS 1996, 450-464; RINALDI TUFI 2012, 480). The excavations, however, are unpublished (Fig. 4).

In front of the *forum*, a large bath complex has been excavated (STICOTTI 1913, 98-103). This occupies an area of 3960 square meters. P. Sticotti, on the basis of the elements that the excavations revealed, but which have now quite completely disappeared, not only reconstructed the luxurious character of the baths, decorated with marble and mosaics, but also tried to identify the

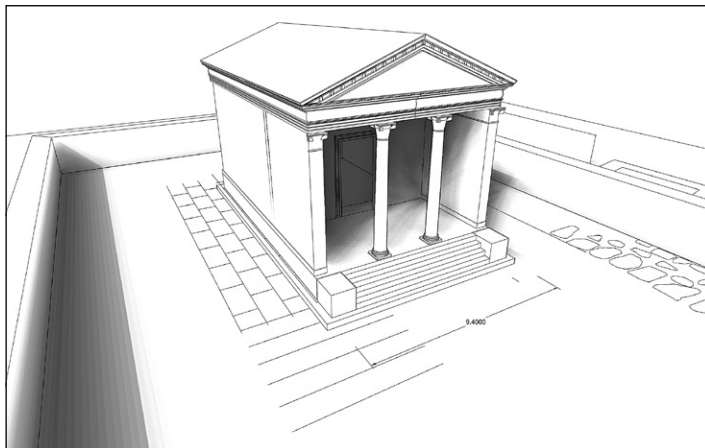


Fig. 6 – Doclea, so-called temple of the goddess Roma, hypothetical reconstruction (A. D'Eredità).

functions of the individual rooms, at least for the western part (Fig. 5). The scholar interpreted this section as that reserved for men. From a vestibule with niches in two corners, you entered a rectangular room and then a colonnaded courtyard, considered as a gym. From this courtyard, you had access to a series of rooms, among which Sticotti distinguished a *frigidarium* with a tub and some apsidal *calidaria*. Most of the rooms to the S (including the apsidal rooms) have been completely destroyed by the railway. The eastern part of the structure, less studied, could have had a similar plan, with at least a large courtyard (NIELSEN 1990, II, 41, n. 333). These baths are more elaborate and luxurious than those excavated in Salona (WILKES 1969, 381), but they do not seem to have had an axial and symmetrical arrangement, by which they could be recognized as having a so-called «imperial» plan (RINALDI TUFİ 1989, 93; 2012, 479). According to some scholars, the baths were built in the early years of the Flavian city (WILKES 1969, 379-381), but they clearly display different building phases, attested to by the overlapping of masonry structures. Research carried out in 1997-1998, but unpublished, has shown that in the *thermae* there are at least four different phases (see the following paragraph).

To the E of these structures another smaller bath complex has been identified (850 sqm). The two bath complexes were probably connected, because from the geophysical surveys the presence of structures are detected between the two buildings (see COZZOLINO, GENTILE in this volume).

On the E side of the *forum*, a temple, oriented NS, has been under excavation since 2009. It is a prostyle tetrastyle of about 8.5×15 m and was built in the central part of a sanctuary closed on the W, S and probably E sides by

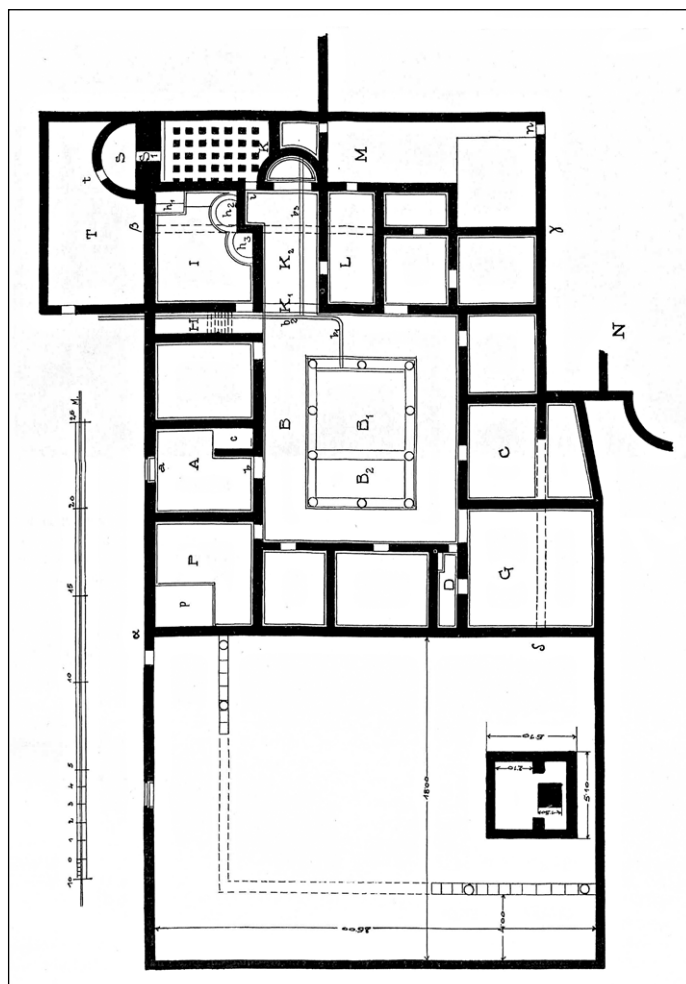


Fig. 7 – Doclea, plan of the private house (after STICOTTI 1913, fig. 37).

a set of rooms, while a porch faces onto the main street. The temple has been interpreted as the *Capitolium* of the city (BAKOVIĆ 2011), but in the other cities of the Adriatic area, these temples always face the *forum* (BAKOVIĆ 2011, 19). According to the excavation data, the construction of the temple can be set in the Flavian period, but there were several successive restorations; from the 4th century, some workshops were set up in the abandoned rooms (ŽIVANOVIĆ 2014).

Two other temples were hypothetically identified by fragments of their pedimental decorations: one depicts a bust of the goddess Roma on a clypeus and the other has a bust of Diana (STICOTTI 1913, 73-74). The first temple was prostyle in antis on a *podium* with steps in the facade (14×9.4 m); it was enclosed by a wall and faced the main road (Fig. 6). The building, the so-called temple of the goddess Roma, was probably the seat of the imperial cult (RINALDI TUFİ 1989, 91). The so-called temple of Diana was very similar in plan (15×10 m) and stood within a *temenos*. Unfortunately, today the temples are almost completely destroyed. The plans follow well known models also present in the Adriatic regions, which however are usually tetrastyles on the facade (WILKES 1969, 374); but the religious buildings preserved in the *Illyricum-Dalmatia* province are not numerous (RINALDI TUFİ 2012, 478).

Despite being a private house (Fig. 7), the building excavated between the two temples is of particular interest because of a little temple in its own enclosure that was incorporated into a courtyard (WILKES 1969, 375-376). Similar buildings are found inside some Pompeian houses, dating to the last phase of life of the city (BASSANI 2008, 93-98). According to J. Wilkes, «its prominent position in the city, together with the private temple, leaves no doubt that this was the residence of one of the wealthiest families, probably the *Flavii* who built the *forum*» (WILKES 1969, 376-377). The architecture of this house, however, has never been studied, although it is very interesting on grounds of the presence of the temple and a private bath.

C.S.

3. ARCHIVAL DATA FOR THE KNOWLEDGE OF THE MAIN BUILDINGS OF DOCLEA: SOME CASE-STUDIES

We will now provide some examples of how archival documentation can help to integrate the data obtained from the study of the published works and from the direct examination of the structures. In particular, we will deal with the area of the *forum* and the baths, on which we have also concentrated our archaeological and architectural analysis till now.

First of all, regarding the *basilica*, a careful reading of documents relating to previous research makes it clear that the building underwent subsequent interventions. P.A. Rovinski concluded that the *basilica*'s mosaic floor had been overlaid with marble slabs (ROVINSKI 1909, 24): the floor's two layers were indeed confirmed by the 1957 explorations (Administration for the Protection of Cultural Properties, Cetinje, Doclea Excavations Documentation 1957, 4). In the NW corner of the room C, the stone slab with inscription facing downwards was built into the second floor layer (STICOTTI 1913, 127). The 1956 Forum Exploration Report notes that underneath the *basilica* «several fragments of ornamented ceramic done in relief forms ... which

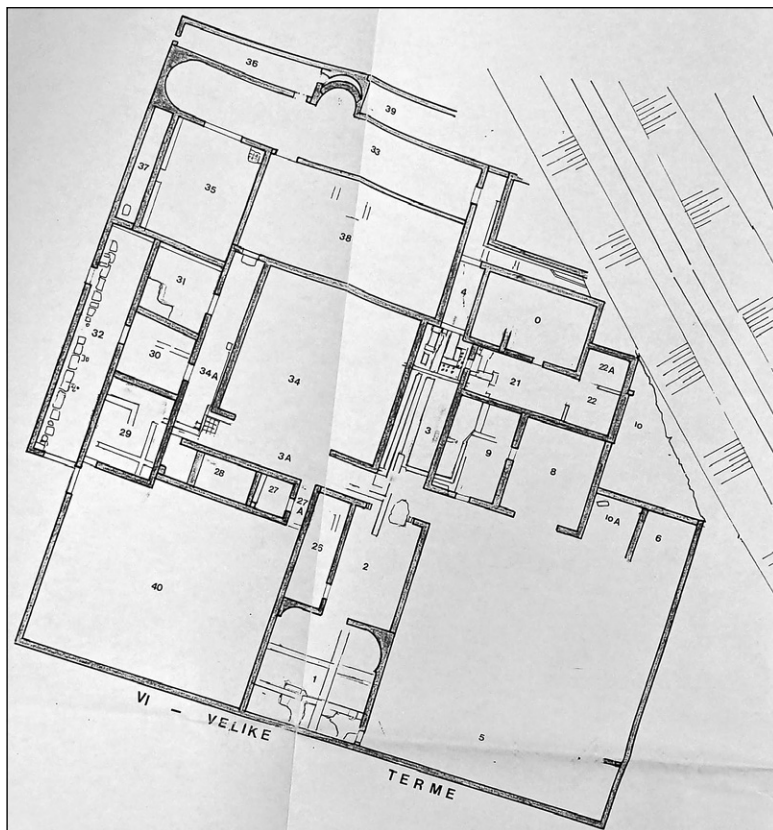


Fig. 8 – Doclea, plan of the large *thermae* (Administration for the Protection of Cultural Properties, Cetinje, Doclea Excavations Documentation, 1999).

belong to later times» have been found (Administration for the Protection of Cultural Properties, Cetinje, Doclea Excavations Documentation 1956, 5). The drawings of those fragments have not been preserved, neither we have their photos (KOPRIVICA 2016, 74).

Regarding the small rooms located in the N and S sides of the *forum* square and generally interpreted as shops or *tabernae*, Suić pointed out that these rooms did not follow a typical *tabernae* layout and that, even if they had served that purpose, their number had been small: so the question became where was Doclea's trade centre located (SUIĆ 1976, 155-156). Suić's words have been given additional strength by the SE necropolis archaeological record, demonstrating Doclea intensive economic development from the late 1st through the early 4th centuries AD.

Archival data are even more significant with regard to the baths. It is not known when the large *thermae* were constructed. Neither do we know who erected them. J.J. Wilkes considered that in the early years of the Flavian city, the *thermae* had been constructed by the members of a small group of the wealthy families of Doclea (WILKES 1969, 379-381).

The scholars place the large *thermae* to the 2nd century AD. The 1999 archaeological explorations inferred the existence of four building phases, which were not precisely dated individually nor brought into any sequential interrelationship – with the exception of some points (rooms 2 and 3, 3 and 9, 3 and 21; rooms 4B, 33 and 35) where the make-up characteristics of the floors permitted that conclusion to be drawn (Fig. 8). According to these explorations, the oldest layer is represented by the remains of the room 1 walls dated back to the 2nd century AD and the parts of the walls in rooms 3 and 9. However, the researchers do not offer sufficient data by which to derive a feasible idea of the initial structural layout. The fact that a number of the rooms of the *thermae* were demolished by the railway track construction makes the research task even more difficult. However, it is clear that the current architectural plan of the *thermae* is not from the 2nd century. According to the archaeological record so far, one cannot ascertain the date of the second and the third phases. The last construction phases have been dated to the 4th century AD, as recognized in the rooms 32, 33 and 36 (Administration for the Protection of Cultural Properties, Cetinje, Doclea Excavations Documentation 1999).

After the examination of the 1999 exploration results, it is clear why M. Suić wrote down that «the Doclea *thermae*... in their respective layout dispositions did not follow the typical Roman *therma* plan... in spite of their not reproducing the type that had already been adopted at the time of their construction» (SUIĆ 1976, 164-165). According to the contemporary body of knowledge, and while relying on Sticotti's conclusions, Suić also observed that the large *thermae* looked as if they had been formed in one construction stage. Now there is a clearer reason why the large *thermae* and the communication design between rooms does not mirror the typical architectural structure of Roman *thermae*.

The *Inventarna Knjiga* (Inventory Log) that was kept during the 1999 explorations reveals that the major finds were found in rooms 29, 30, 31 and 32 (coins, ceramic fragments, plates, *terra sigillata*, pots, and alike), which leads to the hypothesis that, at some stage, shops, i.e. *tabernae*, might have been located there (KOPRIVICA 2016, 119-120). The form of room 31, like the letter L, resembles the *tabernae* in Pompeii and Ostia. There are many known Roman *thermae* designs that included a row of shops. The Baths of Caracalla on its N terrace housed shops (YEGÜL 1992, 46).

D. Srejić and Č. Marković consider that it is likely that the small *thermae*, excavated in 1962 (Fig. 9), had once been an integral part of a single

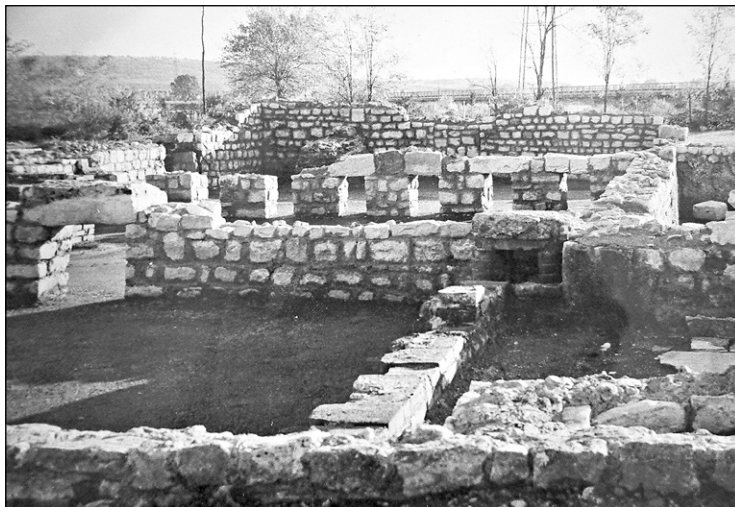


Fig. 9 – Doclea, small *thermae* (Administration for the Protection of Cultural Properties, Cetinje, Doclea Excavations Documentation, 1962).

complex with the large *thermae* and that, later, they were detached. The small *thermae* were – after being partitioned twice – used as a stand-alone building; they lasted longer than the large *thermae*, right until the 5th century AD (SREJOVIĆ 1968, 93; MARKOVIĆ 2006, 355).

T.K.

4. RECORDING METHODS AND USE OF 3D RECONSTRUCTION

Every study of ancient buildings in an urban context involves the analysis of the terrain in which they are embedded. Aero-photogrammetry is currently one of the most reliable, rapid and efficient methods for data acquisition and analysis. Photos taken from an automatic pilot system (UAV, Unmanned Aerial Vehicle, aka drone) and the subsequent process of data detection and rectification permit the generation of three-dimensional images, metrically reliable and usable as a descriptive base for the life-cycle analysis of the built environment. In Doclea, two methods of data acquisition have been used, particularly focused on the structures:

- 1) The topographical survey, performed with the total station and a differential GPS, of the main points located along the perimeter of all the emerging architectural structures to ensure a geometric consistency;
- 2) The mapping of the structures with high-resolution photographs obtained by a drone, reconstructed and rectified by softwares dedicated to the production

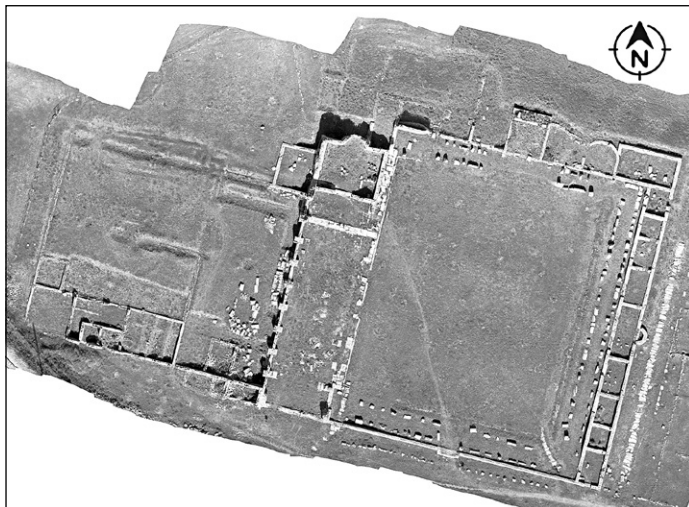


Fig. 10 – Doclea, *forum* orthophoto by drone (2017, A. D'Eredità).

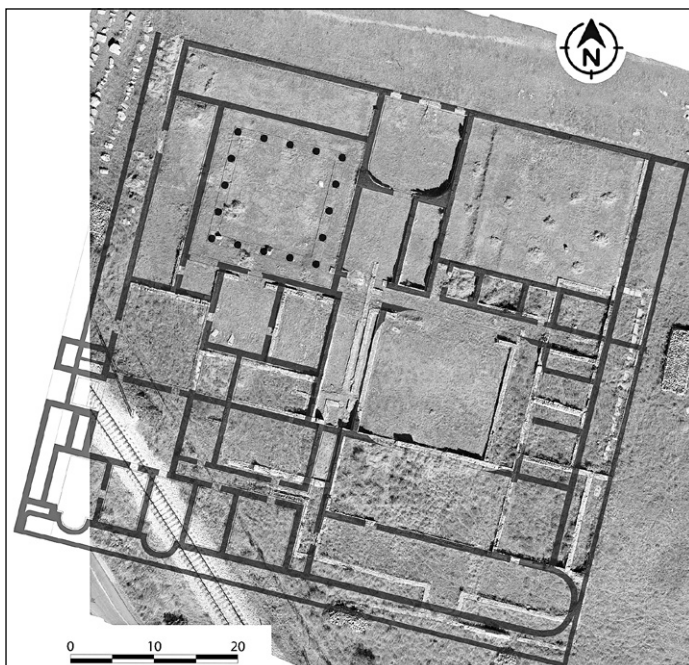


Fig. 11 – Doclea, large *thermae*: Sticotti plan over orthophoto (A. D'Eredità)



Fig. 12 – Doclea, large *thermae*: different building phases (A. D’Eredità)

of DEM and related orthophotos (Fig. 10). ‘Structure from Motion’ software was employed as the most advanced technology for aero-photogrammetric data processing. The sequential shots acquired by cameras on drones allow the drawing of three-dimensional images, thanks to the software ability to recognize the points of interest obtained by triangulation. The results are suitable for the production of plans, prospects and sections, which data provide the basis on which to set up 3D models and virtual reconstructions.

In this initial phase, only a rough three-dimensional model was created, with the aim of summarily defining the volumes of the buildings. It is a worthwhile step to confirm the archaeological and archaeometric data, such as verifying and comprehending the proportions of the architectural elements in relation to the surrounding buildings and the alignments of structures; it is also a way to theorize on the development of the built-up area, based on the traces still distinguishable on the ground. In this first phase, we analysed the construction techniques of the masonry and proceeded to a preliminary classification that will prove useful for a subsequent and more complete analysis of the structural types.

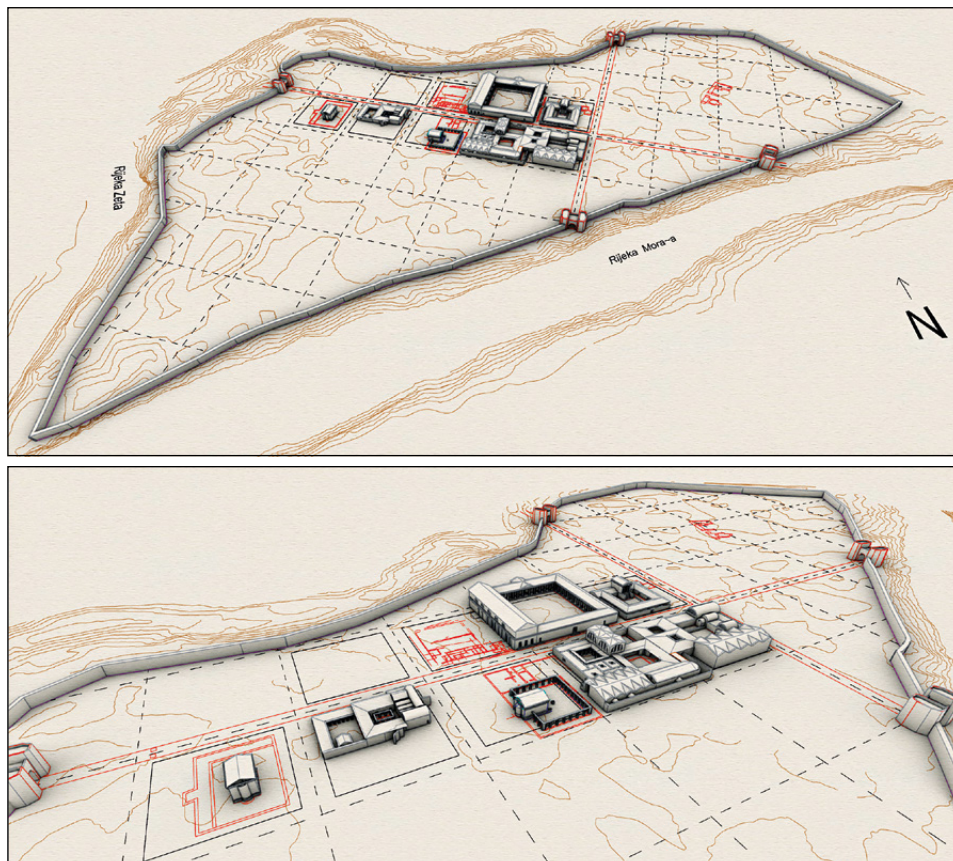


Fig. 13 – Doclea, visual reconstruction of the city: work in progress (A. D'Eredità).

In order to better define a complete image of the monuments, it is also essential to find similar architectural examples, not only for the evidence on dating they may provide, but also for supporting any virtual reconstruction of the buildings under study.

At the end of the whole process of documentation, analysis and study of archaeological and architectural data in a historical-comparative perspective, we should be able to create more refined 3D models.

The first results of our work concern the *forum* and above all the main *thermae*, one of the least studied buildings, but of great interest for the possibility of identifying different building phases. The analysis is being carried out on two levels: first, the checking of historical plans in the field, and then, the creation of a new plan. Superimposing over the plan of STICOTTI (1913, fig.

52) the photos from drone, that are accurate in their position and measurements (Fig. 11), we observed a series of discrepancies, especially in the eastern zone, at that time still only partly investigated and subsequently the focus of unpublished excavations. In the absence of archeological and stratigraphical data, we are proceeding with a detailed survey of the structures, to elucidate the different building phases. Here we present an example of the classification of the masonry structures demonstrating their belonging to different building phases: they are from a central sector of the building, where this situation is particularly evident (Fig. 12).

On the basis of this systematic study of the ancient walls, together with a careful analysis of all the architectural elements, the elaboration of a three-dimensional model was started according to the principles and aims already stated. Here, then, is the first image of our work on the monumental area of the city (Fig. 13). Visual reconstruction of monuments is one of the fundamental instruments for interpreting the past, especially if they are highly deteriorated. We feel sure that the production of coherently reconstructed models can help to spread the knowledge of the site to as broad a public as possible.

A.D.

CARLA SFAMENI, ANTONIO D'EREDITÀ

Istituto di Studi sul Mediterraneo Antico

CNR – Roma

carla.sfameni@cnr.it

antonio.deredita@cnr.it

TATJANA KOPRIVICA

University of Montenegro-Historical Institute

tkoprivica@ucg.ac.me

ARCHIVAL DOCUMENTS

Arheološki muzej [Archaeological Museum], Split. Arhiv Luke Jelića [The Archive of Luka Jelić], XVI/3.

Uprava za zaštitu kulturnih dobara, Cetinje [Administration for the Protection of Cultural Properties, Cetinje]. Dokumentacija o istraživanju Duklje [Doclea Excavations Documentation], 1956, 1957, 1999.

REFERENCES

BAKOVIĆ M. 2011, *Preliminarni rezultati istraživanja na prostoru kapitolnog hrama lokaliteta Doclea*/Preliminary results of the research into the area of the Capitol temple of the Doclea site, «Nova Antička Duklja/New Antique Doclea», 2, 9-28.

BALTY J.-CH. 1981, *Curia ordinis. Recherches d'architecture et d'urbanisme antiques sur les curie provinciales du monde romain*, Bruxelles, Académie royale du Belgique.

- BASSANI M. 2008, Sacraria. *Ambienti e piccoli edifici per il culto domestico in area vesuviana*, Antenor Quaderni 9, Roma, Quasar.
- DRAŠKOVIĆ 2013, *Bronzana figurina glumca sa Dokleje i problem ubikacije antičkog teatral* *Bronze actor figurine from Doclea and the problem of locating the ancient theatre*, «Nova Antička Duklja/New Antique Doclea», 4, 121-133.
- FULFORD M. 1993, *Silchester: The Early Development of a Civic Capital*, in S. GREEP (ed.), *Roman Towns: The Wheeler Inheritance*, York, York Council for British Archaeology, 16-33.
- GAGGIOTTI M. 2009, *Templum Pacis. Una nuova lettura*, in F. COARELLI (ed.), *Divus Vespasianus. Il bimillenario dei Flavi*, Milano, Electa, 168-175.
- GROS P. 1996, *L'architecture romaine du debut du III^e siècle av. J.-C. à la fin du Haut-Empire, 1. Les monuments publics*, Paris, A. et J. Picard.
- JOVIĆEVIĆ B. 2010, *Izveštaj sa konzervatorsko-restauratorskih radova na arheološkom lokalitetu antičke Duklje kod Podgoric/Report from conservation and restoration works on the archaeological site of ancient "Doclea" near Podgorica*, «Nova Antička Duklja/New Antique Doclea», 1, 48-58.
- KOPRIVICA T. 2013, *Diary entries and photographic documentation of J.A.R. Munro related to the archaeological exploration of Doclea (Montenegro) in 1893*, «Zograf», 37, 1-15.
- KOPRIVICA T. 2016, *Arhitektura kasnoantičke Duklje. Mogućnost rekonstrukcije [The Architecture of late Antique Doclea. Possibilities of Reconstruction]*, Filozofski fakultet u Beogradu [Faculty of Philosophy-Belgrade], PhD dissertation.
- MACDONALD W.L. 1965, *The Architecture of the Roman Empire*, New Haven, Yale University Press.
- MAR R. (ed.) 1993, *Els monuments provincials de Tarraco*, Documents d'Arqueologia Classica, 1, Tarragona, Universitat Rovira I Virgili.
- MARCONI C. (ed.) 2015, *The Oxford Handbook of Greek and Roman Architecture*, Oxford, Oxford University Press.
- MARKOVIĆ Č. 2006, *Arheologija Crne Gore*, Podgorica, CID.
- MENEGHINI R., SANTANGELI VALENZANI R. 2007, *I fori imperiali. Gli scavi del Comune di Roma (1991-2007)*, Roma, Viviani.
- MUNRO J.A.R., ANDERSON W.C.F., MILNE J.G., HAVERFIELD F. 1896, *On the Roman Town Doclea in Montenegro*, «Archaeologia», 55, 1-60.
- NIELSEN I. 1990, *Thermae et balnea: The Architecture and Cultural History of Roman Public Baths*, Aarhus, Aarhus University Press.
- ROVINSKI P. 1909, *Černogorija v jejo prošlom i nastojašem, Geografija.-Istorija.-Etnografija.-Arheologija*, tom II, čast 4 [Montenegro in the Past and Present, Geography-History-Ethnography-Archaeology, vol. II, part 4], S. Peterburg (republished in Cetinje-Novi Sad 1994).
- REVELL L. 2014, *Romanisation*, in ULRICH, QUENEMOEN 2014, 380-398.
- RINALDI TUFİ S. 1989, *Dalmazia*, Roma, Latium.
- RINALDI TUFİ S. 2000, *Archeologia delle province romane*, Roma, Carocci.
- RINALDI TUFİ S. 2012, *Doclea, città romana del Montenegro*, in DE MARINIS G., FABRINI G.M., PACI G., PERNA R., SILVESTRINI M. (eds.), *I processi evolutivi della città in area adriatica*, BAR International Series 2419, Oxford, Archaeopress, 477-490.
- SREJOVIĆ D. 1967, *Rezultati arheoloških istraživanja na području antičke Dokleje*, «Materijali», 4, 69-76.
- SREJOVIĆ D. 1968, *Novi nalazi iz Dokleje*, «Starinar», 19, 89-100.
- STEVOVIĆ I. 2014, *Praevalis. Obrazovanje kulturnog prostora kasnoantičke provincije (Praevalis. The Making of the Cultural Space of the Late Antique Province)*, Podgorica, Društvo arheologa Crne Gore.
- STICOTTI P. 1913, *Die römische Stadt Doclea in Montenegro*, Schriften der Balkankommission Antiquarische Abteilung Heft 6, Wien, In Kommission bei A. Hölder.

- SUIĆ M. 1976, *Antički grad na istočnom Jadranu*, Zagreb, Liber.
- TRIFOGLI A. 2014, *Dal ginnasio ellenistico al forum di Cirene*, in M. LUNI (ed.), *Cirene greca e romana*, Monografie di archeologia libica 36, Roma, L'Erma di Bretschneider, 183-198.
- ULRICH R.B., QUENEMOEN C.K. (eds.) 2014, *A Companion of Roman Architecture*, Chichester, Blackwell.
- YEGÜL F. 1992, *Baths and Bathing in Classical Antiquity*, New York, The Architectural History Foundation Cambridge (Massachusetts).
- WARD-PERKINS J.B. 1974, *Roman Architecture*, New York, H.N. Abrams.
- WILKES J.J. 1969, *Dalmatia*, London, Routledge and Kegan Paul.
- ŽIVANOVIĆ M., STAMENKOVIĆ A. 2012, *O gradskim bedemima antičke Dokleje/On city walls of Ancient Doclea*, «Nova Antička Duklja/New Antique Doclea», 3, 115-145.
- ŽIVANOVIĆ M. 2014, *Zanatske radionice kasnoantičke Dokleje (Craft Workshop in late Roman Doclea)*, Podgorica, JU Muzeji i galerije Podgorice.

ABSTRACT

The study of the architecture of the main public buildings of Doclea is being carried out on the basis of bibliographical and archival sources, integrated with the direct analysis of the existing structures. Research aimed at finding documents of the earlier explorers of Doclea, as well as documentary photographs, are particularly important. We also analyse the main buildings of Doclea in the context of Roman architecture, seeking to identify local and regional features. An analysis of the existing structures, combining archaeological and architectural methods, according to the most modern theories of the so-called archaeology of architecture, is essential. This same approach was applied to the monuments in the *forum* area and in the main *thermae*, where we have collected a series of data that we are now processing. The ultimate goal of our research is to produce a 3D reconstruction of the main buildings.

THE FUTURE OF THE PAST: FIRST PERSPECTIVES FOR DOCLEA TODAY

1. INTRODUCTION

The title of this section consciously recalls that of the project we are currently running in Doclea for 2018-2020 ('The Future of the Past: Study and Enhancement of Ancient Doclea, Montenegro', Project of Great Relevance for Italian Ministry of Foreign Affairs and International Cooperation, MAECI). Here we outline what we, the Italian and Montenegrin teams, have achieved in the first year of campaigning (2017), and what we intend to realize in the following three years. From the outset, our focus was not only on extracting scientific knowledge and seeking the preservation of the site (RINALDI TUFI, BARATIN, PELOSO 2010), but also to consider its future development and utilisation. In agreement with and with the approval of the Ministry of Culture of Montenegro and the Ministry of Foreign Affairs and International Cooperation of Italy, our final goal is the design and completion of a sustainable plan for the relaunch of the site, in order to hand it back to its community as a tool for socio-cultural and economic growth.

In this paper, we mention only some very preliminary areas of input, partly based on the first experiences had on site at Doclea, and again drawing upon similar enhancement examples coming from Italy (GOZZER 2004; BECUCCI 2007; BARATTI 2012; MIBACT 2017; SANTO *et al.* 2017).

Doclea is set in a beautiful natural landscape, relatively unspoilt by human intervention – with the notable exception of the very invasive railway erected in the late forties of the last century, which cut across the middle of the site. The first observation to swiftly arise is that the site's context is very conducive for the creation of an ecomuseum, or a 'museo diffuso' (an open museum) that could most effectively link the historical-archaeological heritage of the site to the surrounding territory and the resident community. A structure that is more than a simple archaeological park – a concept perhaps by now past its simple beginnings – is required: an innovative conception, capable of becoming an active instrument not only for a sustainable conservation of the existing monuments, but able above all to be developed as a means of fruitful cultural dissemination for both contemporary and future generations (RIVA 2017). Our purpose, therefore, is to give new life to the archaeological site through enhancing its relationship with its wider context, involving not only past human groups, but also the communities living in Doclea today. For Doclea to succeed it must be accepted by the resident community as a fundamental component of its everyday life (RICCI 2006; CARANDINI 2017).

2. THE ECOMUSEUM CONCEPT

The term ecomuseum was coined by Hugues de Varine in 1971 (*cit.* in JALLA 2015): «Something that represents what a territory is, and what its inhabitants are, starting from the living culture of people, from their environment, from what they have inherited from the past, from what they love and wish to show their guests and pass on to their children». Starting from this citation, made during the Ninth Conference of the International Council of Museums, it was established that «Un écomusée, ce n'est pas un musée comme les autres... C'est un musée éclaté, interdisciplinaire, démontrant l'homme dans le temps et dans l'espace, dans son environnement naturel et culturel, invitant la totalité d'une population à participer à son propre développement par divers moyens d'expression basés essentiellement sur la réalité des sites, des édifices, des objets, choses réelles plus parlantes que les mots ou les images qui envahissent notre vie».

From these very first definitions, it is clear that the open museum is conceived of not only a tangible and physical space, in which may be exhibited pieces of cultural heritage, but an extraordinary tool able to improve and enhance not only the material cultural heritage of the population, but also its immaterial aspects. The two facets, the material and the immaterial, mutually strengthened by their reciprocal relationships, will be first and foremost an integral part of daily local life, and only then be revealed to tourists. The relation and interplay between territory and local ethnography are evident and important from the start. Well before the coinage of the abstract vocabulary and concepts attached to the term ecomuseum, the real-life promotion of these links were initially and independently developed as instruments to protect the traces of rural societies at a time when rapid and massive urbanization could completely eradicate a thousand-year cultural heritage in no time at all. After an initial propagation of such approaches in France, where there is now a federation of ecomuseums, the idea spread to francophone countries such as Canada, and more recently into many other European countries. This new concept of a museum took root also against many different physical backdrops: border areas, natural parks, former industrial areas, and other places marginalized by the mass tourism development (AUGÉ 1992; MAGGI 2002; REINA 2016). Since the 1990s, these developments are emerging on the world scene as one of the most innovative ways of effecting the difficult marrying up of conservation and development, of culture and environment, of local identity and tourism.

More recently, in the *Declaration of Intent* in the Long Net Workshop held in Trento (Italy) in May 2004, it was stated that «An Ecomuseum is a dynamic way in which communities preserve, interpret, and manage their heritage for a sustainable development. An Ecomuseum is based on a community agreement».

In our particular case, by ecomuseum we mean an archaeological park project, linked to a territory and characterized by traditional lifestyles, whose natural and historical-artistic heritage is above all relevant and worthy of protection, restoration and enhancement. Unlike a normal museum, which usually acts as a container (even in the case of those of considerable size), an ecomuseum is chiefly defined by *not* being surrounded by walls. It is an extensive area without necessarily any defined limits, in which the visitor can enjoy an *en plein air* experience, discovering a landscape of particular interest through following at their whim physical and cultural paths, their curiosity stimulated by encountering educational and research activities, tangibly involving local associations, cultural institutions and the whole community.

An ecomuseum does not remove cultural heritage from its context to display it 'artificially' elsewhere, in the closed space of a traditional museum, but it leaves it undisturbed and in place, an object-lesson in the re-appropriation by the community of its cultural heritage and ultimately identity. It is the community who takes care of the territory in which it is living. Above all, the main daily input of this sort of project is affected by the local communities: they not only participate in the area's activities and so profit in the economic re-launch, but are the first line of defence, responsible for the site's conservation and management. The philosophy behind this sort of open museum is the realisation of a constructive relationship between a population in its entirety, the involved institutions and a multidisciplinary team of experts.

One of the first and most welcome results of the ecomuseum experience is not just the protection of the historical heritage, but the perceptible enhancement of a physical area, with all its cultural features and points of particular interest. The protection of historical and pre-historical remains, the recovery and enrichment of natural environments, the rediscovery of ancient paths and trekking activities, an increase of diverse agricultural and crafts activities with economic benefits, a relaunch of hotel facilities and catering services.

Because such open museums do not have clear physical limits, another aspect of great value is the development of thematic itineraries involving other sites existing in the same territory and facing similar problems. This is achieved through the creation of an interconnected network of cultural sites, bringing out both affinities and peculiarities, all useful for the creation of a richer cultural and tourist experience.

In order to respond to the perceived desired increase among people for 'open museums', as theorized by Fredi Drugman (DRUGMAN, BASSO PERESSUT, BRENNIA 2002), ecomuseum projects promote the rediscovery of the identity of the territory through its cultural distinctiveness, and by experiencing a network of places of historical, artistic, environmental and touristic interest.

3. A FIRST METAPROJECT ON DOCLEA

The physical features of the territory in which Doclea lies rapidly suggested the ecomuseum approach as a suitable way of handling the site and its natural environment. Both traditional and innovative activities are to be found here, in the fields of pastoralism, agriculture and specifically viticulture. The terrain, even though very near to the capital Podgorica, is still little inhabited: a few built-up areas exist, but most are uncultivated sectors, left open for pastoralism. The presence of the beautiful Zeta and Morača rivers, with small beaches where during the very hot summers it is possible to bathe (if not swim) could be a very positive feature for encouraging visitors.

The lack of very impressive archaeological monuments encourages the establishment, as the key-stone for the enhancement of the territory, of a positive interaction between natural and cultural aspects, rather than one reliant only on archaeological remains. The experience thus will not be limited to the Doclea archaeological site, but will involve also other cultural aspects, some still needing development, and ethnographic activities to be rediscovered and promoted, as well as drawing attention to other archaeological and historical traces, known but not yet valued sufficiently – namely Bronze Age remains (tumulus?), Roman roads and a mine, medieval structures and churches.

The scientific aspect will be not neglected but indeed improved, with spaces and activities on site to preserve and enhance the cultural memory of the territory. Specific attention will be given to the younger generations, in order to attract them into cultural and ethnographic activities linked to their territory.

The project development requires first a requisite framework, i.e. a precise list of the needs and objectives, with an assessment of their various scales and desired rate of progression.

The primary goals for a Doclea ecomuseum are:

- The definition, even if loose, of the large area of the ecomuseum, with particular care paid to the most sensitive areas from an archaeological point of view and to the creation of a rational sequence of areas to eventually and accumulatively be added into the ecomuseum project.
- The design of internal routes, always strictly linked with external ones, already known or to be assessed, in order to regulate visitor flows (including the intended placement of information boards), with the overall aim to connect the site and the ecomuseum with the wider surrounding area.
- Enhancement of the landscape, with targeted interventions also of an environmental nature (arrangement of the greenery, ad hoc plantings, etc.).
- Planning of the support network/infrastructure for the reception of tourists in the territory, with the organization of reservations for overnight stays and catering.

The archaeological site will be the centre of attraction for the ecomuseum, but for the fullest benefit to be derived by visitors, special interventions are needed, including:

- The infrastructure necessary for reaching the site, both for the able and not-able bodied (parking, bus lines, bus stops, accessibility, etc.), with the direct involvement of local institutions.
- The creation of an architectural plan, including all aspects of public reception: from the primary services such as sanitary facilities, refreshment points, etc., to information points and services.
- The review of the information-delivering structures: informative posters, both traditional and on the multimedia, where new technologies can be exploited through the creation of dedicated apps.
- The planning for a permanent laboratory/set-up for the study, the promotion and the dissemination of the knowledge of the site (such could, for example, contain activities for students and children).
- The promotion of teaching and research activities, implemented with the direct involvement of the people and local institutions.
- Protection of the most delicate finds, but avoiding the presence of invasive fences or bollards.
- The installation of plant (hydraulic-electric) to facilitate the most complete use of the site, the correct functioning of the structures and the maintenance of standards of hygiene and safety.
- The creation of traditional museum spaces, using the already existing built structures (as the so-called ‘Old School’ and the Guards Building), in which to locate multimedia, virtual and art exhibitions.
- The creation of new spaces, none-invasive, but able to host small groups of visitors in the open countryside from which enjoy a new visual experience of Doclea and its environment; such spaces to be used also for conferences, meetings, games and educational activities etc.
- The provision of lighting for some section of the site, so as to open it for cultural activities, such as musical and theatrical events, for example, using as an arena the space of the *forum*.
- Implementation of a security alarm system able to protect the site from vandalism and thefts, designed to be not invasive.

The Doclea area is one suited to the creation in villages around the site of modest tourist facilities, such as bed-and-breakfast and family hospitality, so preventing the building of big and invasive hotel infrastructures, with refreshment points at which one may taste local products made with traditional procedures. An open museum here can promote the territory, not only

through the cultural and scientific upgrading of the archaeological site, but through a broad-based sustainable tourism in which the local community itself performs the leading role.

The ultimate aim is that of the rediscovery of the cultural identity of the territory and the collective memory of a community, giving new life to past material culture and traditions, offering to visitors and inhabitants alike an integrated human experience of physical and mental well-being.

LUCIA ALBERTI, ANTONIO D'EREDITÀ

Istituto di Studi sul Mediterraneo Antico

CNR – Roma

lucia.alberti@cnr.it

antonio.deredita@cnr.it

REFERENCES

- AUGÉ M. 1992, *Territoires de la mémoire, les collections du patrimoine ethnologique dans les écomusées*, Paris, Édition dell'Albaron et Fems.
- BARATTI F. 2012, *Ecomusei, paesaggi e comunità. Esperienze, progetti e ricerche nel Salento*, Milano, Francoangeli Editore.
- BECUCCI S. 2007, *Musei ed ecomusei*, in D. MUSCÒ (ed.), *L'ecomuseo tra valori del territorio e patrimonio ambientale*, Firenze, Collana Briciole, Cescvot editore, 15-25.
- CARANDINI A. 2017, *La forza del contesto*, Bari, Editori Laterza.
- DRUGMAN F., BASSO PERESSUT L., BRENNI M. 2002, *Il Museo della cultura politecnica. Luoghi del sapere, spazi dell'esperie*, Milano, Unicopli.
- GOZZER M.M. 2004, *Voci del territorio: guida agli ecomusei del Trentino*, Firenze, Giunti.
- JALLA D. (ed.) 2005, *Le radici del futuro. Il patrimonio culturale al servizio dello sviluppo locale*, Bologna, CLUEB.
- MAGGI M. 2002, *Ecomusei: guida europea*, Torino, Allemandi Editore.
- MIBACT 2017, *Gli ecomusei*, in Ministero dei Beni e delle Attività Culturali e del Turismo – Osservatorio Nazionale per la qualità del paesaggio (ed.), *Rapporto sullo stato delle politiche per il paesaggio*, Roma, 469-470.
- REINA G. (ed.) 2016, *Gli ecomusei. Una risorsa per il futuro*, Padova, Marsilio.
- RICCI A. 2006, *Attorno alla dura pietra. Archeologia e città tra identità e progetto*, Roma, Donzelli Editore.
- RINALDI TUFFI S., BARATIN L., PELOSO D. 2010, *Valorizzazione del sito archeologico di Doclea, città romana in Montenegro*, «Bollettino di Archeologia online», 1, 71-77.
- RIVA R. (ed.) 2017, *Ecomuseums and Cultural Landscapes. State of the Art and Future Prospects*, Santarcangelo di Romagna, Maggioli Editore.
- SANTO R.D., BALDI N., DUCA A.D., ROSSI A. 2017, *The Strategic Manifesto of Italian Ecomuseums*, «Museum», 69, 86-95 (doi: 10.1111/muse.12153).

SITOGRAPHY

DROPS, la piattaforma mondiale per ecomusei e musei di comunità (<https://sites.google.com/view/drops-platform/home>).

Ecomusei, in *Thesaurus del Nuovo soggettario*, BNCF (<http://thes.bncf.firenze.sbn.it/ricerca.php>).

Ecomusei del Trentino (<https://www.ecomusei.trentino.it/>).

Manifesto strategico degli ecomusei italiani (<http://www.ecomusei.eu/ecomusei/wp-content/uploads/2016/01/Documento-strategico.pdf>).

ABSTRACT

The title of this section consciously recalls that of the project currently running in Doclea for 2018-2020 ('The Future of the Past: Study and Enhancement of Ancient Doclea, Montenegro'). The Authors focus their attention not only on extracting scientific knowledge and seeking the preservation of the site, but also on considering its future development and utilisation. The final goal is the design and completion of a sustainable plan for the relaunch of the site, in order to hand it back to its community as a tool for socio-cultural and economic growth. The rediscovery of the cultural identity of the territory and the collective memory of a community can give new life to past material culture and traditions, offering to visitors and inhabitants an integrated human experience of physical and mental well-being.

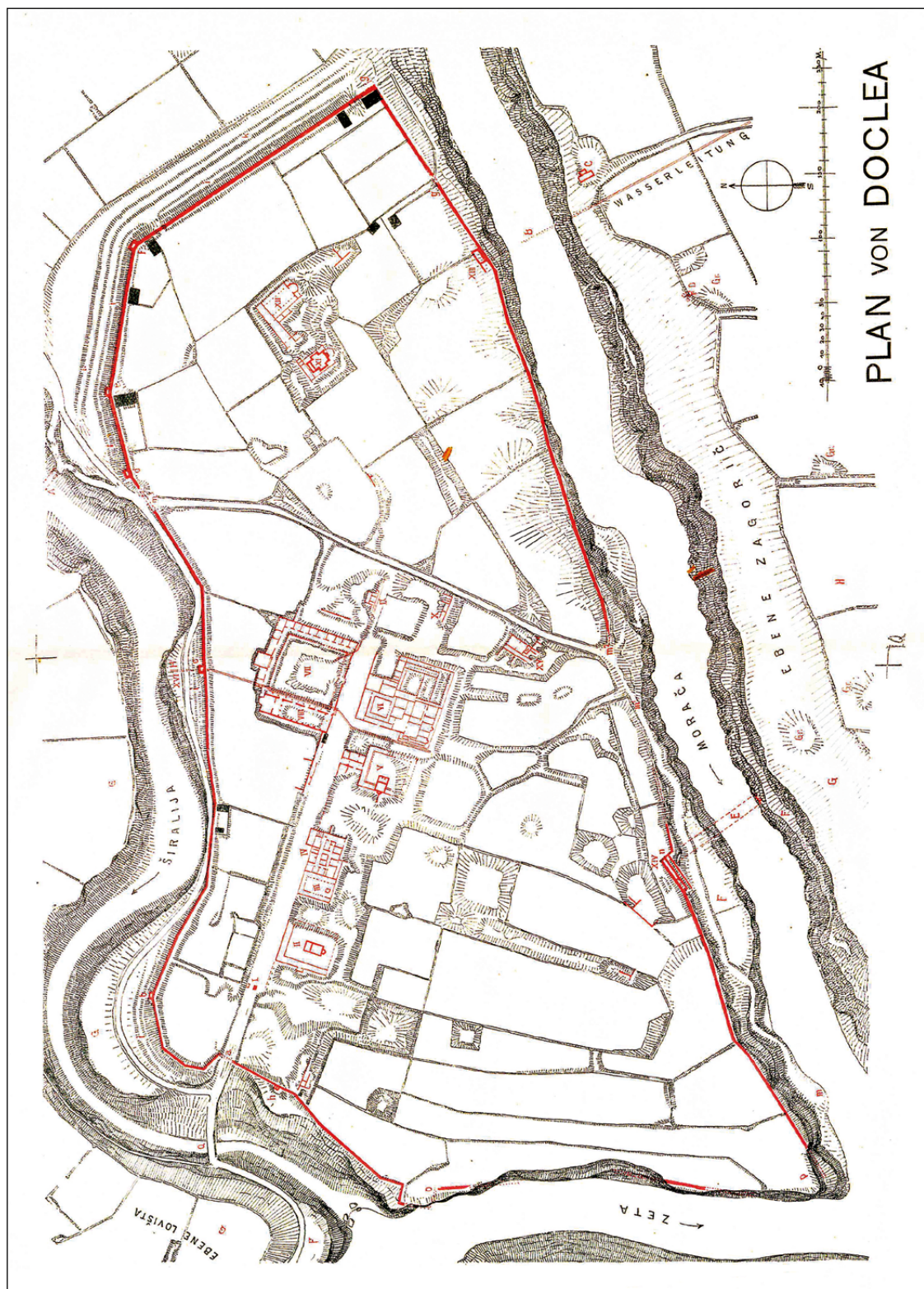


Plate 1 – The plan of Doclea edited by Piero Sticotti in 1913.

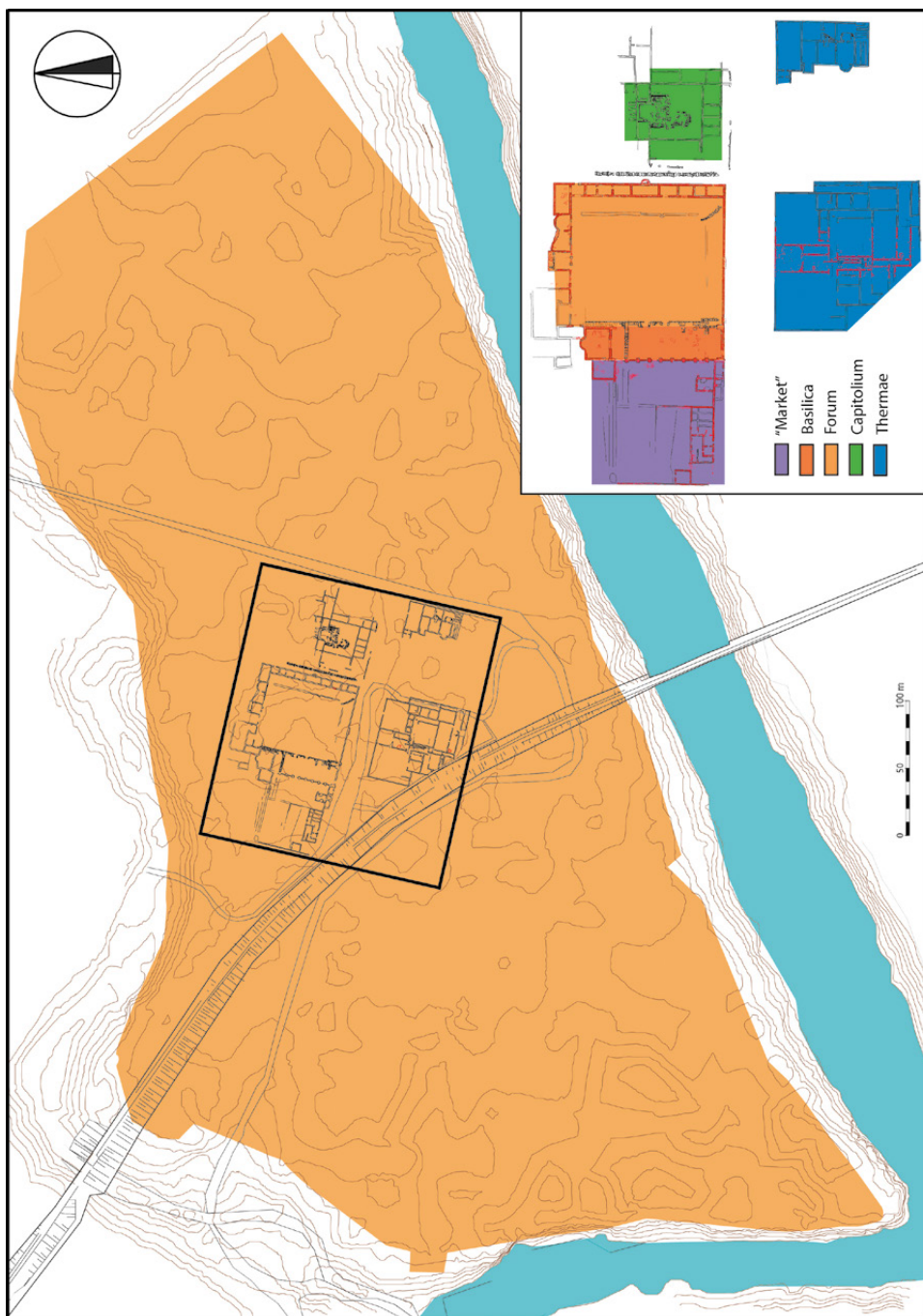


Plate 2 – Preliminary plan of Doclea, after the 2017 campaign, showing the Roman remains and the railroad layout, as verified on site through the integration of various methodologies and sets of data collected. This information comprises archival and cadastre maps, satellite and drone orthophotos, GPS surveying and total station measurements.

Plate 3 – Satellite image of the Doclea urban area: results of the geophysical prospection in red, of the archaeological survey in green, and of the GPS data (architectonical elements and road patterns) in cyan; the blue lines show the hypothetical reconstruction of the urban settlement; ditches and aqueduct on the eastern side (lines in white) are based on STICOTTI 1913 (see Plate 1) (modified from ©2018 Google Image and ©2018 DigitalGlobe).





Plate 4 – GPR results: time slice relative to the time window 14-18 ns (about 0,7-1,4 m in depth), overlapped on the satellite image of Google Earth™ (a) and identification of anomalies (b).