

Urbanism of Roman Siscia

Interpretation of historical and modern maps,
drawings and plans

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The book is dedicated to my father and the city of Sisak devastated in the 2020 earthquake

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Foreword

This book on Siscia (present day Sisak) is largely based on the doctoral dissertation submitted to the Faculty of Humanities and Social Sciences of the University of Zagreb in 2014, supplemented by research and publications completed in the last six years. The choice of the theme was encouraged by the author's personal long-term management of archaeological field research and the projects of conservation and presentation of the remains of Siscia as a conservator archaeologist employed in the Conservation Department in Zagreb. Owing to the highly accomplished field teams that participated in the research, and a support of my office and the City of Sisak, it was possible to maintain a satisfactory professional standard of protective archaeological research in the difficult conditions of monitoring the routes of city infrastructure and building construction in the various parts of the city of Sisak.

Many years of the field research have been articulated in the doctoral dissertation owing to the guidance, advice and patience I received during the preparation of the dissertation from my mentors Prof. Dr Mirjana Sanader and Prof. Dr Marina Milićević Bradač. Also, this work would not be complete without the selfless help of the archaeologists from City Museum Sisak (Mr Zdenko Burkowsky, Ms Tea Tomaš Barišić, Ms Iskra Baćani, and Ms Rosana Škrgulja) in working on the museum material and providing documentation from their own archaeological research and from the 20th-century archaeological data kept in the museum archive. I would also like to thank the team of the Faculty of Humanities and Social Sciences, the Department of Archeology, and especially Dr Ina Miloglav, as well as the archaeologists of the private excavation companies Ms Maris Kristović, Mr Vedran Katavić, and Mr Josip Burmaz, for putting at my disposal the drafts and research results of their excavations even before their own publication. I would also like to thank to Prof. Dr Bruna Kuntić Makvić for her warm support and all translations from Latin. The last effort in completing this book was overcome with the assistance of Dr Branka Migotti, who I would like to thank for her critical observations and a review of the text, as well as its English translation.



Location of Siscia (present day Sisak) within the Roman Pannonia.
 (Hrvatska enciklopedija, online edition, Leksikografski zavod Miroslav Krleža, 2021)

1.

Introduction

Siscia is one of the most important archaeological sites in the Republic of Croatia, which has been archaeologically researched for approximately the last 170 years. The amount of data gathered over time is massive but of unequal quality, which affects the interpretation of the urbanism of this Roman town during its five- or six-century long development. The disparity in the quality of data concerns particularly the documentation of the moveable and immovable finds produced over the centuries of research and containing various and diverse kinds of materials, from descriptions, plans, sketches, and field reports to the documentation produced according to modern standards of archaeological methodology.

The reason for addressing the subject of Roman urbanism of Siscia with several syntheses on this city's topography already in existence (Faber 1974; Šašel 1974; Vrbanović 1981; Nenadić 1986; Buzov 1993; Vuković 1994), lies in the fact that the majority of the systematic archaeological excavations took place after the last-mentioned monograph's appearance (1994), resulting in an abundance of new data on Siscia and its spatial organization. In addition to that, the application of new technologies in gathering and analysing the data on site locations, as well as reassessing the past evidence, enabled a more precise mapping of finds and findings, ultimately resulting in a more accurate plan of the Roman city.

This book aims at analysing and interpreting the urban development of Siscia on the basis of the available archaeological documentation and all existing cartographic renderings of Siscia and its modern-day counterpart, the city of Sisak. In order to achieve this goal, it was first necessary to provide a georeferenced map of the urban structure of Siscia within the perimeter defined as a city, comprising the area within the city walls and in the peri-urban zone with the cemeteries, the entrance roads and the stretch of the Kupa River flowing through the town.¹ The so

gathered and systemized data enabled the acquisition of new information and opened the possibility of reinterpretations of archaeological sites and finds. The most important contribution to the interpretation of the Siscian urbanism has been achieved by the archaeological research in Sisak, which occurred in various time periods. The first of the excavations, unfolding from the mid 19th century to the beginning of the 20th century, were stimulated by the evaluation of Siscia as the archaeological site of national importance.² The excavations from the 1950s to the 2000s resulted entirely from the protection of the archaeological finds threatened by modern building, and were executed exclusively within the frame of developmental and infrastructural investments.³ Finally, the excavations over the last two decades have grown into systematic research using all archaeological methods that provide a better insight into the stratigraphic sequences of Siscia.⁴

Although the archaeologically researched area approximately covers up to 10% of the total surface of the Roman town within the walls, the distribution and number of the excavated plots in Sisak are exceptionally high. From the inception of the archaeological researches more than 500 sites have been documented, with some of the excavated areas measuring up to 2000m², and some trenches stretching several kilometres in length. Two facts combine in rendering Sisak one of the most researched sites in Croatia. First, Siscia underlies the active modern city, and second, there is the legal obligation to recover and study all registered cultural goods.⁵ However, the total evidence of Siscia is not provided by the archaeological

of managing of the Registry of cultural goods of the Republic of Croatia (NN 89/11, 130/13). The orthogonal photography was used in order to establish the relationship between the present state of building and the recovered urban structure of Siscia. The digital relief model was used in the presentation of the archaeological remains, aiming at the most authentic modality of the usage of space in the Roman period. This map of the ground morphology with superposed finds, free of the present-day building, enables insight into the three-dimensionality of the archaeological context.

² See the Archives of the Zagreb Archaeological Museum (Arheološki muzej u Zagrebu, hereafter AMZ): Dossier Siscija 1851–1935.

³ See the Archives of City Museum Sisak (Gradski muzej Sisak, hereafter GMS).

⁴ The financial reports on the excavations of the archaeological area of Siscia, the Archaeological Park St Quirinus (sv. Kvirin), and the prehistoric site of Segestica, are all kept in the Ministry of Culture of the Republic of Croatia.

⁵ The Act on the protection and preservation of cultural goods (NN 69/99, 151/03, 157/03, 100/04, 87/09, 88/10, 61/11, 25/12, 136/12, 157/13, 152/14, 98/15, 44/17, 90/18, 32/20, 62/20).

¹ In order to produce a georeferenced map of the urban structure of Siscia, the following official cartographic bases of the State Geodetic Administration of the Republic of Croatia in the *dwg* format were gathered: the Croatian state topographic map (HOK 1:5000), a digital cadastral base (1:1000), a digital orthophoto (DOF 1:5000), and a digital relief model (DRM 1:25000). The digital cadaster was used as a basis for the accommodation of individual building plans in order to achieve the most precise measurements, property data, denoted toponyms, streets and squares. The cadastral map is an official basis for defining of protected zones and individual archaeological sites according to the *Book of rules on the form, substance and the way*

research alone but is also found in written sources which, starting from antiquity, describe the layout of Segestica and Siscia with their constituent urban features. Finally, some of the evidence for Siscia stems from cadastral and cartographic data, which amassed during the 18th and 19th centuries when the remains of the Roman town were still traceable on the ground. The advantage of the last-mentioned source is typical for the archaeological sites occupied continually to the present day, and especially those which witnessed the rise of cities from 1500 onwards, as was the case with Sisak (cf. O’Keeffe and Yamin 2006: 88). In other words, the total of the documents describing a city and serving its needs, which could conditionally be named “city chronicles”, provide the earliest evidence of archaeological remains and make an invaluable source of data for the urban archaeology.

Today, Roman Siscia lies entirely under the historical core of the city of Sisak as formed at the beginning of the 19th century (Maroević 1998). Less assuming urban medieval features, situated within the Roman perimeter, remained covered by the classicist urban matrix of the present-day historical core of Sisak, which was devised by the engineer Ivan Fistrović in 1829. The orthogonal grid of streets with rationally arranged urban blocks produced a planned spatial order, which in its turn introduced a more elaborate design for the development of a larger city in future (Maroević 1998).⁶ Although such regulation suggests its origin in Roman urbanism, in the time of its realization Roman remains were only sporadically present in the cityscape, which means that the regulation in question and the ensuing building completely obliterated the earlier urban layers, and that their concordance was actually coincidental. Judging by the engineer drawings of Luigi Ferdinando Marsigli, kept in the University Library of Bologna (Marsigli n.d.: 1044, n. 101. fasc. A), at the beginning of the 18th century the remains of Roman Siscia were still standing high, and the ruins of the east city wall reached the height of 6m.

The research and interpretation of Siscia have been based on the principles of urban archaeology using all the advantages of such context, e.g., numerous excavations and abundant archival and other documentation, but also suffering from disadvantages imposed by limited access to sites, which are then compensated by non-destructive research methods.

What do the preserved structures immediately overlying the foundations of Siscia look like, and how much of their appearance should be ascribed to the

influence of the Roman city? The area of the present town of Sisak is a heterogenous urban space comprising several entities, the first of which is the 19th-century historical core on the left bank of the Kupa River, directly overlying the ruins of Roman Siscia. Along the right bank of the Kupa the district of Pogorelac is situated accommodating family houses built in the first half of the 20th century on the site of the prehistoric settlement of Segestica. Further to the south along the Kupa stretches the so-called Vojni Sisak (Military Sisak), while still further southwards the area at the confluence of the Kupa and Sava Rivers remains undeveloped, yet featuring a 16th-century fortification built as a defence against the Turks. Further to the south stretches the industrial zone of Sisak, developed in the first half of the 20th century. The outer ring of the urban area comprises suburban settlements attached to the city, which gradually merge into rural areas and a natural landscape (Lolić and Petrinc 2011: 148).⁷ Sisak is today the regional and administrative centre of several different geographical regions: the Banovina, the Turopolje, the Sisačka Posavina, the Lonjsko Polje, and the Moslavina. It belongs to the category of moderately large centres within a wider gravitation area of the city of Zagreb (Rogić *et al.* 2000: 45). Administratively, Sisak comprises 31 settlements within the area measuring 400km² (9% of the total county area), and numbers 47.699 inhabitants (Rogić *et al.* 2000: 54; Census 2011). In terms of geological and climatic-hydrological properties, the area of Sisak belongs to the south-western periphery of the Pannonian region (Halamić 2009). The area of Sisak is a low floodplain dominated by the Sava River, which in this stretch becomes a markedly lowland watercourse with the shallow bed, abounding in meanders and backwaters that allow settlement only on terraces (Borovac 2002). The area’s geological substratum is of fluvial origin, while the settlement formed at the contact zone between the terrace and a higher level of the floodplain at 99 AMSL, created by joint working of the Sava and Kupa Rivers (Kekuš 1984: 23). Some 35% of the areas of the Sisačka Posavina (the Sava Valley in the area of Sisak) and the Banovina is covered in woods, with sessile oak, hornbeam, willow, alder, poplar, and ash-tree predominating (Slukan Altić 2003: 11).

The relationship between Siscia and Sisak is characterized by a mechanic overlying of structures lacking any amalgamation as is typical of cities such as Rome or Split for instance, which have witnessed a continuous transformation of Roman structures and their incorporation into the succeeding historical fabric as a vital building substance. In Sisak, Roman structures

⁶ See the Conservation basis with the system of measures for the protection of immovable cultural goods for the Urbanist plan of the regulation of the centre of the so-called Stari Sisak (Old Sisak), The Conservation Department in Zagreb, 2003, Sisak III-32/1.

⁷ See the Conservation basis with the system of measures for the protection of immovable cultural goods for the Urbanist plan of the regulation of the centre of Old Sisak, The Conservation Department in Zagreb, 2003.

have been demolished mostly to the ground level, with building material abundantly used in modern constructions in Sisak itself and its surroundings. Brick and tile were used for walls, while dressed stones were most usually walled into the buildings' foundations (Burkowsky 1999: 80; Lolić and Petrinec 2011).⁸ Although the recycling process represents a historical and physical bond, in terms of a site Siscia has been primarily preserved in its "archaeological" layer (Lolić and Petrinec 2011: 147).⁹

The activities related to Roman finds in Sisak had an early start, which was directly connected with the founding of the National Museum in Zagreb in 1836, as well as with the establishment of the amateur association under the name Archaeological Association Siscia in 1876 in Sisak (Burkowsky 2000: 52–71). The long history of research of Siscia has resulted in a corpus of documentation, which can be classified into three categories on the basis of the exactness, level, and interpretation of the data. The first group comprises modern archaeological documentation from the 1980s till the present day, compiled during protective archaeological excavations with the aim of interpreting the stratigraphy and positioning the immovable finds in the absolute coordinate system. The second group is composed of scale-drawing documentation produced in the 20th century before the 1980s. It mostly comprises manually produced engineer drawings of archaeological finds recorded in scale in relation to the existing buildings, but without positioning in the absolute (or relative) coordinate system.¹⁰ The third group is represented by

the 18th- and 19th-century documentation composed of cartographic illustrations of Sisak and scale drawings of the remains of individual buildings' sections and streets of Roman Siscia, produced in line with the old system of measuring lengths and areas. As one of the lands of the Austro-Hungarian Monarchy, Croatia was a signatory to the Metre Convention of 1876; since then, the measurements for length and area were given in the metric system (cf. Jakobović 2008).¹¹

The documentation which has served as the background for the present research comprises the following items: 30 scale drawings by L. F. Marsigli and 10 cartographic illustrations of Sisak given in the old measuring system; around 300 scale drawings given in metric system and containing the basic equipment in the form of scale drawings, or elevation drawings with chainage lengths; around hundred georeferenced scale drawings taken with modern geodetic instruments. By using a modern software, the drawings in the metric system have been vectorized and inserted in the digital cadastral basis of Sisak. The scale drawings given in old measurements have been examined and converted into the metric system (cf. Herkov 1974). During the present study these drawings have not been vectorized but were used as rasterized illustrations and accordingly studied and interpreted on the model of "map reading", i.e., iconographically.

In addition to the drawing documentation, data on the location of Siscian urban structures and infrastructure from excavation journals and reports from the mid 19th century to the 1980s have been used. The documentation predating the 1980s lacks an archaeological interpretation including analysis of moveable finds associated to the architectural layers of Siscia. An exception to this is the excavations performed jointly by the Zagreb Archaeological Museum and City Museum Sisak in 1954, which produced a summary interpretation of two more subsistent periods of Siscia within the five- or six-century long history of its Roman urbanism. On the basis of the archaeologically interpreted data in the last 40 years complemented with non-destructive methods (geophysical surveys), the documentation lacking an archaeological interpretation of the architecture or an analysis of moveable finds has been reassessed. This was done through multiple analyses: of the ground plans of individual buildings and architectural complexes; of the nature of their location within the city walls; of the use of space as a whole. The so defined and consequently applied methodology, based on the excavations to date and the analysis and interpretation

⁸ The Photo Archive of the Conservation Department in Zagreb keeps the documentation of north-western Croatia from 1961 (authors of photographs: M. Visin, K. Petrić, A. Mlinar, T. Petrinec, Z. Bogdanović). Roman brick and tile were used for building the major part of the 16th-century Old Town of Sisak at the confluence of the Sava and Kupa Rivers, as well as many houses in the historical core of Sisak. Stone blocks, sarcophagi, stelae, and other massive stone materials can be spotted in the foundations of urban houses (e.g., at nos 5–9 Lađarska Street), as well as in the foundations of traditional timber architecture in surrounding villages (e.g. Bok Palanječki).

⁹ From the 1960s onwards, with the establishment of the modern Conservation Service in north-western Croatia, it transpired that the archaeological heritage dominated in the total of the building heritage of Sisak, and not only at the level of individual archaeological finds, but especially in terms of urbanism on the whole. Siscia has been inscribed on the list of the protected immovable heritage of the Republic of Croatia through the 1962 Act on the preservation of the urban whole of the town of Sisak, including the archaeological zone Old Sisak bounded by the rivers Sava, Kupa, and Odra. Such legal status enabled regulation of building in the protected archaeological zone, as well as conducting archaeological research in advance of modern development. It was exactly for the sake of the evaluation of archaeological areas due to new knowledge on the topography of Roman Siscia, gathered in the excavations up to 2001, that the Conservation Service separated the subject of the protection of the archaeological heritage from the building heritage in general through the establishment of the area of Siscia-Segestica as an independent protected archaeological zone. With this, the archaeological zone was considerably expanded through the incorporation of the cemeteries and newly recovered sections of Siscia, and was inscribed in the Register of the immovable heritage of the Republic of Croatia under number Z-2767.

¹⁰ The documentation is kept in the GMS.

¹¹ The cartographic documentation is kept in the following institutions: the Chapter Archive in Zagreb, the War Archive in Vienna, the Regional Cadastral Office in Sisak, and the University Library in Bologna.

of the complete existing documentation on Siscia, supported by the computer draft/design programmes developed in the 2000s, has resulted in the city plan representing an almost completely defined perimeter of Siscia within the city walls. Moreover, for the first

time an insight has been gain into the dimensions of city blocks and the nature of certain urban districts, as well as the overall appearance and layout of the street grid in various developmental stages of Siscia.