

CROATIA AND EUROPE IN THE
10TH CENTURY –
ON THE OCCASION OF THE
1100TH ANNIVERSARY OF THE
CROATIAN KINGDOM

SCIENTIFIC CONFERENCE

ZAGREB, 28 and 29 October 2025

IMPRESSUM

Organizatori skupa/Conference organized by:

INSTITUT ZA ARHEOLOGIJU

Jurjevska ulica 15

HR-10000 Zagreb

FILOZOFSKI FAKULTET SVEUČILIŠTA U ZAGREBU

ODSJEK ZA ARHEOLOGIJU

Ivana Lučića 3

HR-10000 Zagreb

Za organizatora/Conference organizer:

dr. sc. Mirja Jarak

dr. sc. Siniša Krznar

Znanstveni odbor/Scientific Committee:

dr. sc. Mirja Jarak (Zagreb, Croatia)

dr. sc. Siniša Krznar (Zagreb, Croatia)

dr. sc. Tajana Sekelj Ivančan (Zagreb, Croatia)

dr. sc. Krešimir Filipec (Zagreb, Croatia)

dr. sc. Naďa Profantová (Prague, Czech Republic)

dr. sc. Silviu Oța (Bucharest, Romania)

Organizacijski odbor/Organizational Committee:

dr. sc. Mirja Jarak

dr. sc. Siniša Krznar

dr. sc. Petra Nikšić

Petra Jeršek, mag. archeol.

Mjesto održavanja/Address of the Conference:

Knjižnica Filozofskog fakulteta Sveučilišta u Zagrebu

Ivana Lučića 3

HR-10000 Zagreb

Nakladnik/Publisher

INSTITUT ZA ARHEOLOGIJU

Glavni i odgovorni urednici/Editors-in-chief

dr. sc. Siniša Krznar

dr. sc. Mirja Jarak

Prijevod i lektura/Translation and proofreading

Autori/Authors

Kristina Deskar

Korektura/Proofreading

Siniša Krznar

Kristina Turkalj

Grafičko oblikovanje/Graphic design**Računalni slog/Layout**

Hrvoje Jambreč

Tisak/Printed by

???

Naklada/Issued

60 copies

ISBN 978-953-6064-82-3

Supported by the Ministry of Science, Education and Youth of the Republic of Croatia and European Union – NextGeneration EU (NPOO) through internal project of Institute of Archaeology Medieval Communities on the Eastern Adriatic Coast Through the Prism of Interdisciplinary Cemetery Research (MedComm)

MedCOMM



**Funded by
the European Union**
NextGenerationEU

CONFERENCE PROGRAMME	
Tuesday, October 28, 2025	
08:30–09:00	Registration
09:00–09:15	Opening of the conference, welcome speeches: Domagoj Tončinić , Dean of the Faculty of Humanities and Social Sciences in Zagreb Marko Dizdar , director of the Institute of Archaeology
First Session (09:15–11:15) Session Chair: Mirja Jarak	
09:15–09:35	Yanko M. Hristov Escalation and De-escalation of an Early Medieval Peripheral Conflict: The Bulgarian-Croatian War of the 920s
09:35–09:55	Krešimir Filipec <i>De terra Brasclauo</i> – The Late 9th and Early 10th Century
09:55–10:15	Marko Sinobad, Emil Kmetič-Marceau Antique Heritage in the Early Middle Ages: The Example of Archaeological Sites in the Knin Area
10:15–10:35	Vladimir Sokol Lobor – Bojna – Knin: Three Early Croatian Centres of Power – Their Interrelations
10:35–10:55	Miklós Takács Who were the Early Hungarians of the 10th century?
10:55–11:15	Discussion
11:15–11:35	coffee break

Second Session (11:35-13:35) Session Chair: Petra Nikšić	
11:35-11:55	Anita Rapan Papeša, Hrvoje Vulić, Edina Balić, Erzsébet Zelliger, Géza Szabó, Gábor Hosszú A Poetic Sigh from the Past on the Rovash Inscription of Ilok
11:55-12:15	Nada Profantová Emerging Social Complexity: High-status Horsemen's Equipment in Early Medieval Bohemia. The Archaeology's Perspective.
12:15-12:35	Šimon Ungerman „Danubian“ Jewellery in Moravia (9 th and 10 th centuries)
12:35-12:55	Vladimir P. Goss “Is there a Pre-Romanesque Style in Architecture?”, Forty-Three Years Later”.
12:55-13:15	Mirja Jarak The 10th Century Monasteries – a Link Between Croatia and Byzantine Dalmatia
13:15-13:35	Discussion
13:35-15:00	lunch break
Third Session (15:00-16:40) Session Chair: Siniša Krznar	
15:00-15:20	Tomáš König Neighbouring Allies: The Early Hungarians and Late Great Moravia
15:20-15:40	Elisabeth Nowotny Early Slavic Settlement in Lower Austria in the Light of New Dating Evidence
15:40-16:00	Szabina Merva 10th-Century Visegrád (HU). Continuity of the Early Medieval Centre?
16:00-16:20	Antonio Lovrinčević, Tomislav Hršak, Siniša Radović An Early Medieval Settlement in Baranja: Beli Manastir – Sudaraž
16:20-16:40	Discussion

Wednesday, October 29, 2025	
First Session (09:00-10:40) Session Chair: Mario Novak	
09:00-09:20	Nikolay Hrissimov The Central Balkans Events in the 810-820s: Pliska's Point of View
09:20-09:40	Andrej Pleterski, Jernej Rihter Creating a Typochronological System for the Eastern Alps and Its Synchronization with Pannonia
09:40-10:00	Vesna Zmaić A Byzantine Shipwreck Cargo at Cape Stoba, Island of Mljet
10:00-10:20	Silviu Oța Necropolises from the 9th-10th Centuries in the Northern Area of the Lower Danube and in Dobruja (The Stage of the Research)
10:20-10:40	Discussion
10:40-11:00	Coffee break
Second Session (11:00-12:40) Session Chair: Petra Jeršek	
11:00-11:20	Siniša Krznar Vaćani – Grlo: New Research of the Early Medieval Cemetery in the Šibenik Hinterland
11:20-11:40	Dejan Filipčić, Mato Ilkić A New Interpretation of Carolingian Coins from Northern Dalmatia
11:40-12:00	Ozana Martinčić The Textile Heritage of Early Medieval Croatia through the Prism of Grave Goods
12:00-12:20	Željka Bedić, Mario Novak A Tale of Medieval Skulls: Bioarchaeological Examination of the Crania from the Vukovar - Lijeva Bara Cemetery (10 th /11 th c. CE)
12:20-12:40	Discussion
Closing of the conference	

Escalation and De-Escalation of an Early Medieval Peripheral Conflict: The Bulgarian-Croatian War of the 920s.

The rise of the Croatian state as a significant regional power under King Tomislav, as well as the active diplomatic maneuvers of the Byzantine emperor Romanos I Lekapenos, driven by pressure from Tsar Symeon's ambitions and his decisive military victories, largely explain the Bulgarian-Croatian conflict of the 920s. While seemingly not particularly intense and prolonged in terms of direct military engagement, nowadays, this early medieval Balkan conflict has sparked an ongoing modern-day scholarly debate regarding its causes, scope, chronology, and geographic dimensions, as well as its broader consequences. Despite the growing body of studies, some key questions remain. For example, did the emerging confrontation between these two Balkan powers (both experiencing substantial military, economic, and political growth) constitute a pivotal moment for Bulgarians and Croats alike? Or was it, rather, a peripheral episode, considering that the main strategic interests of each lay in different and largely non-overlapping directions? Although the primary sources' information is limited, it nonetheless allows for both the reconstruction of certain developments surrounding the conflict's escalation and its resolution. These insights offer valuable perspectives on the broader geopolitical dynamics of the Balkans in the early 10th century.

***De terra Brasclauo* – The Late 9th and Early 10th Century**

During the 9th century, Lower and Upper Pannonia underwent parallel political and social developments within the Frankish Empire. The area between the Drava and Sava rivers experienced modest economic recovery following the rebellion of Ljudevit and incursions by the Bulgars, while a new feudal center emerged and expanded rapidly around Lake Balaton, Blatnograd, under the leadership of Pribina and his son Kocelj. By the final decades of the 9th century, Blatnograd had outpaced other Pannonian centers in terms of infrastructure and economic strength. In this context, Duke Braslav appeared as a figure who, by the end of the 9th century, unified the regions of Lower and Upper Pannonia under his rule. Pilgrims from "Braslav's land" are recorded in the Cividale Evangeliary, while the Fulda Annals confirm his status as ruler ("*regnum*") when King Arnulf, in 896, granted him the former estates of Kocelj around Lake Balaton. Braslav disappears from historical sources before 907, when a battle occurred near one of his strongholds, at an as-yet unidentified location, in which Hungarian forces defeated the Frankish army. This marked the collapse of the Frankish administration in Pannonia, but archaeological evidence suggests continuity of settlement and the absence of radical changes in "Braslav's land" during the early 10th century. Although Blatnograd declined economically, it was not abandoned. Demographic shifts became more noticeable only after the mid-10th century in other parts of the country. More substantial political and social changes emerged with the Holy Roman Empire's efforts to reassert control over Pannonia, during which the descendants of the former Pannonian nobility sought new political alliances in the struggle for influence across the region between the Sava River and Lake Balaton.

Antique Heritage in the Early Middle Ages: The Example of Archaeological Sites in the Knin Area

The genesis and evolution of the early medieval Croatian national archaeology are closely connected to Knin and the work of Fra Lujo Marun, the first to identify and start investigating the early medieval archaeological sites in the area of Knin in the late 19th century. He centred his research around churches and cemeteries at the archaeological sites that exhibited visible architectural remains or chance early medieval archaeological finds. Marun's work, resulting in the first comprehensive archaeological topography of the Knin area, owes its success to the enthusiasm and valorization of national history that became a vital element in the formation of the contemporary national identity, his strong influence in the local community and the mobilization of many prominent members of the scholarly community of the time being a crucial factor of this process. The direction of the development of the national archaeology that had been set by Marun was retained even after his death. Two men were instrumental in maintaining this continuity: Stjepan Gunjača, who also began his career in Knin and worked on the archaeological sites in the Knin area throughout his working years, and Dušan Jelovina, who was born in Knin and succeeded Gunjača as the director of the Museum of Croatian Archaeological Monuments. The approach to the subjects of the Croatian national archaeology in Dalmatia did not change significantly even after them, although in Continental Croatia, and also other European countries, the Early Middle Ages have been viewed from many different perspectives, with special emphasis on the research of Slavic settlements. Only the recent generations of archaeologists have started to deal with the context within which the early medieval sacral structures in the Dalmatian hinterland emerged, as well as their relations with the inherited architectural heritage of antiquity. The administrative system formed in late antiquity and the architectural heritage of antiquity were the foundations of the social, economic, and political growth of the early medieval Croatian duchy and, later, kingdom. The economic basis of the early medieval social communities was not sufficient for the construction of new infrastructure and the relations necessary for the creation of a more complex social system, due to which the heritage of antiquity was used for the gradual setup of a feudal society of the High Middle Ages. Spas Hill above Knin, Kapitul near Knin, and Crkvina in Biskupija, representing the most significant early medieval archaeological sites in the Knin area, were all established on the sites of earlier structures from antiquity. However, the natures, spans, and purposes of these sites were never researched in their own right. The understanding of the ancient horizon of these sites is important for a more complete comprehension of their early medieval phases and the gradual process of the transformation of the ancient into the early medieval cultural landscape.

Lobor – Bojna – Knin: Three Early Croatian Centres of Power – Their Interrelations

Biskupija, Bojna, and Lobor are currently the three most significant early medieval archaeological sites in Croatia, followed by Ždrijac and Velim. Besides the archaeology of these sites, their importance also lies in the historical and political relevance of the earliest period of the Arrival of the Croats and the emergence of the first Croatian state within the borders of the former Western Roman Empire.

All three of these sites appeared almost simultaneously; Biskupija approximately 20–30 years before the other two. All three have a sacral structure dating from the mid-9th century; Biskupija has one that is 20–30 years older. The burial horizon, beginning in the mid-9th century, at the two northern sites is marked by a group of graves with no finds and with rectangular burial chambers. It is possible that this type of burial was also discovered at Biskupija, but the 19th-century documentation of the investigation of this site is incomplete, making it impossible to know whether this site also yielded a group of graves with no finds. These three sites are related by the material culture as well; elite burials in the centre of the church and jewellery finds from the same period of the 9th century were discovered at all of them.

There are also scarce historical data on these sites, primarily Biskupija and probably Lobor. We can assume links with Bojna, relatively close to Sisak, as the settlement with plenty of common people and clergy, perhaps after Ljudevit's war that mentions Sisak, and during Tomislav's reign in the 10th century. The information from the somewhat later period of the Early Middle Ages comes mostly from Knin-Biskupija, particularly the 11th and 12th centuries, when the Croatian bishop's seat moved to Knin. However, the transfer of the capital from Knin to Solin-Salona in the first half of the 10th century, as well as the international factor of the reign of King Tomislav, marks the new era of the evolution of the Croatian state. Consequently, Bojna and Lobor remain only remarkable archaeological sites and witnesses of their time, whose connection to Knin in the south in the Early Middle Ages this paper acknowledges.

Who were the Early Hungarians of the 10th century?

This lecture is dedicated to the review of the recent literature in Hungarian archaeology regarding the definition of the term *the Early Hungarians*. Almost all research results on this topic have been published in Hungarian, resulting in the absence of international-level reactions to this question, despite the fact that similar issues emerge in the early medieval archaeologies of other Central and Eastern European nations.

There are three answers to the question of who the Hungarians at the time of the "honfoglalás", i.e., the seizure of their present-day homeland, were.

The first thesis argues that the Early Hungarians represented a superstratum. According to it, this community was made up solely of various leaders, members of their entourage, and their families. The main characteristic of this community would be its militant nature. Moreover, this community (Militäre Oberschicht in German literature) would signify an incomplete structure community. That is, this community would only include leaders and warriors, and not the social classes responsible for food production and the crafts that are not directly connected to military activities.

The second thesis states that the Early Hungarians represented a community with a complete structure, i.e., a structure that included the social classes who worked the land and worked on non-military crafts. This had been the dominant thesis in Hungarian archaeology from the 1960s till 2000, when its popularity declined.

The third thesis implies that the Early Hungarian community was stratified based on ethnicity. The governing classes were of Turkic origin, and Hungarian, a Finno-Ugric language, was only the mother tongue of the lower classes. Adjacent to this theory is the idea that some Hungarians, who spoke the Finno-Ugric language, could have migrated to the Carpathian Basin in the late 7th or the beginning of the 8th century.

The author attempts to present both the positive and negative sides of these theses, not concealing that the historical sources on this topic are extremely scarce, while the archaeological finds are very difficult to date with multiple, sometimes even contradicting, interpretations.

Despite all of these uncertainties, the author believes that it would be beneficial to educate the Croatian professional public about these theories. This literature from Hungary could be used for comparison in the ongoing debates on the structure of the early Croatian society in the Croatian professional public.

A Poetic Sigh from the Past on the Rovash Inscription of Ilok

The paper presents the results of an investigation into a bronze mirror that was found on the banks of the Danube near Ilok in Croatia. This surface find of a bronze object with markings that look like writing on the edge of one side, and an animal figure looking back in the centre, was donated to the museum in Vinkovci (its inventory number is A10167). A detailed analysis of the object using a microscope to see if the surface had changed, and a portable XRF instrument to find out what the object was made of, was conducted. After looking at it closely, we concluded that the object was made from high-alloy tin-lead bronze using the lost wax process. Because of how it was made, its raw material and the surface coating, it could also have been used as a mirror. It is a specific version of the nomadic mirrors that certainly appeared in the Carpathian Basin no earlier than the second half of the 7th century. The animal on the Ilok mirror is a feline, and it has features that are typical of a female leopard, already known of in the Bronze Age Koban Culture. The period that yielded this find, which represents a hitherto unknown type of object, can be narrowed down to the 9th -10th century, taking into account the data available for archaeological research.

The mirror is of unparalleled interest because of the 31-character inscription written in Hungarian on the back. The object is defined as a mirror cast in the lost wax technique. The depiction of a leopard (*Panthera pardus*) on the reverse is also parallel to finds from the time of the Hungarian conquest (9th - 10th century). The inscription on the back of the bronze mirror is written in Hungarian in the Carpathian Basin Rovash script. The Ilok inscription is significant because it is cast in metal, making it unique among the known Carpathian Basin Rovash inscriptions. This ensures that the characters retain their original shape with only minor damage. The Ilok inscription is currently the only known example of this version of the Carpathian Basin Rovash. It contains several graphemes that were previously unknown in the Carpathian Basin Rovash inscriptions. In addition, some graphemes contain previously unknown variants, such as the graphemes <β>, <I>, and <χ>. The bronze mirror found in Ilok and its inscription can be considered at different levels of abstraction. This duality represents the opposing concepts of good and evil, as well as the contrast between this world and the other. The Ilok inscription is divided into four parts, separated by a full stop. The text begins with a vivid description of a forest and its rocky border, introducing the theme of the devil's likely influence. It then mentions the 'süly' disease (an old name for boils and other illnesses), which some believe is caused by supernatural forces. The lyrics aim to eliminate the disease and may have a protective effect.

Emerging Social Complexity: High-status Horsemen's Equipment in Early Medieval Bohemia. The Archaeology's Perspective.'

Horsemen played a significant role in military conflicts and society, forming the retinues of the most prominent princes/duces from at least the 2nd half of the 8th century. The evidence of riding, respectively of using horses at all, consists in the determinative extent of chronologically significant metal items identified as horse-harness decorations or horse-riders' equipment. From the 2nd half of the 9th century and in the 10th century, these metal items are relatively rare (they are not found in graves). The rider warriors used these items as ostentatious symbols of status. We do not know their combination; some of them are of Carolingian type. I will show the luxurious stirrups decorated with inlays of western, eastern (old Hungarian) provenance. Only three graves of horses could be dated to the 10th century in Bohemia. Special attention will be paid to the preliminary evaluation of a depot with 27 ornaments of horse harnesses from Northwest Bohemia.

* Project of Czech Scient. Foundation 25-15417S. Forma společenské integrace nebo chyba v matrixu? Raně středověké "megasídlíště" v Roztokách.

“Danubian” Jewellery in Moravia (9th and 10th Centuries)

Among the female jewellery found in Moravia on the burial sites from the 9th and 10th centuries, the main attention was paid to the luxurious ornaments made of gold and silver, decorated with granulation and filigree, mainly associated with the existence of the Great Moravian Empire. In contrast, simple folk jewellery made from copper alloys using unsophisticated techniques, traditionally referred to as “the Danubian jewellery”, has long been on the periphery of scholarly interest. The aim of this paper is to summarise the current state of research on this group of jewellery – its definition, chronology, origin, and the social status of its owners. The Danubian jewellery includes mainly numerous types of earrings; it also includes several types of sheet metal finger rings and spherical hollow buttons, or glass buttons. All of these ornaments are found in Moravia, mainly in rural cemeteries, but also in poorly equipped graves in Great Moravian strongholds. The chronology of the Danubian jewellery presented earlier in the literature is unsatisfactory. The recent analysis of the burial site of Dolní Věstonice – Na Pískách (South Moravia), where over 1300 early medieval graves have been excavated, has provided an opportunity for the creation of a new chronology. Among other things, it has been possible to show that some types of earrings and other types of Danubian jewellery were also in use during the 10th century, a period about whose material culture we still have only a rather vague idea in Moravia.

“Is there a Pre-Romanesque Style in Architecture?”, Forty-Three Years Later”.

In the *Peristil* 25, Zagreb 1982, 33-52, I presented an analysis describing a method of distinguishing between the Pre-Romanesque and Romanesque architecture relying primarily on five sets of clearly identifiable formal elements. Naturally, similar procedures are equally possible when dealing with other stylistic phenomena.

The method served me well in my scholarly practice, yet it has not been fully accepted by the scholarly community, although the awareness of my proposal is visible in the thinking of several major scholars.

What I aimed at achieving, and did achieve with my method, its continuous usefulness through decades, and its final merging with my theories of space, in particular, the concept of art as embodiment of matter in forms available to human senses, represents the bulk of this presentation – linking thus the material and spiritual aspects of human creativity. Or, to quote the father of Croatian art history, Ivan Kukuljević Sakcinski, art is “zercalo naroda”, the mirror of a nation, the materialization of human spirituality in the space wherein it has been generated.

The 10th Century Monasteries – A Link between Croatia and Byzantine Dalmatia

The first certain data on the existence of Benedictine monasteries in Dalmatia originate from the 9th century and inform us about the monasteries in the Croatian territory from the times of dukes Trpimir, Branimir and Muncimir. Sources mention the oldest monasteries in Byzantine towns at the beginning of the 10th century. These are the two monasteries in Zadar: the Monastery of Saint Chrysogonus for men and the Monastery of Saint Mary for women. The early date of the establishment of the Benedictine Monastery of Saint Mary is based on the presumption of authenticity of an inscription in Zadar, known only in the form of an early modern transcript, whose content is often mentioned in literature. This inscription is interesting both since it mentions the monastery in the 10th century and suggests the possible early origin of nunneries in Dalmatia, which are reliably confirmed in the 11th century. The growth of the Benedictine Order in Croatia and Dalmatian towns is usually associated with the 11th century, but, apart from the aforementioned Zadar monasteries, the establishment of some other monasteries can be shifted to the 10th century based on the written sources' contexts and archaeological finds discovered at monastery sites. This refers especially to the Split Monastery of Saint Stephen under the Pines and the royal Monastery of Saint Bartholomew at Kapitul near Knin. The sacral complex of Saint Stephen at Otok, Solin, that included a small monastic community, stands out as a reliably dated royal institution from the second half of the 10th century.

This paper discusses the connection between Croatian rulers and monasteries, demonstrated by the two crucial 10th-century archaeological sites (Kapitul and Otok, Solin) and numerous written sources. The most prominent sources include the Monastery of Saint Chrysogonus and were produced in the 10th and 11th centuries. Croatian kings had donated to this monastery as early as the 10th century, during the reign of Michael Krešimir II. The text, but also the formal aspect of the deeds (especially the way of dating), reveals something about the relations between Croatia and the Byzantine towns in Dalmatia. While Byzantium usually did not use dating according to Christian era, the documents from the Byzantine towns in Dalmatia did include Christian era dates, reflecting the western sources.

Neighbouring Allies: The Early Hungarians and Late Great Moravia

This research examines the Early Hungarian settlement in the Central Danubian region north of the Danube. The aim is to verify the written sources documenting an alliance and associated close interactions between the Early Hungarians and the Great Moravians in the late Great Moravian period. This is achieved through contextualization of the data on the spatial distribution of Early Hungarian burial grounds in the studied region. Results indicate that the Early Hungarian settlement is largely absent from areas showing traces of destruction or military activity targeting Great Moravian fortified centres. This suggests that the Early Hungarian settlement evidenced in southwestern Slovakia predates the fall of Great Moravia.

Early Slavic Settlement in Lower Austria in the Light of New Dating Evidence

The early Slavic settlement of Lower Austria has traditionally been connected to the areas north of the Danube. This was backed by the distribution patterns of grave findings as well as settlements, which are significantly more numerous. Yet new grave finds have recently added to the picture, making it necessary to take into consideration the valleys south of the Danube as well as the southern rim of the Vienna Basin.

Typologically, the finds associated with early Slavic presence can be connected to relative chronological systems of pottery of neighbouring regions, allowing approximate dating. Focussing on cremation burials, the oldest are those in undecorated urns with Prague-type features, followed by more developed forms; others in decorated urns were mainly dated to the second half of the 7th century, whereas singular urn burials in inhumation burial sites of the 8/9th century are hitherto suspected to be late representations of this burial tradition.

Hitherto, these settlement or grave finds resp. find contexts have only been ¹⁴C-dated in exceptional cases. Thus, an initiative regarding their ¹⁴C-dating has been started, keeping in mind that some of them are old finds, of which the cremated bones have not been kept, or they might not yield dates due to certain circumstances. To elucidate this, the challenges of dating calcinated bones are addressed.

Whereas the situation in a funerary context is usually clear (with the exception of disturbances), the interpretation of the dating of objects from settlement contexts requires a careful assessment of the taphonomy. This applies particularly to the dating of the organic material from the filling of settlement features.

The Slavic occupation has been associated with the abandonment of concerned regions by the Lombards, the time of which is still unclear, as the date of 568 from historic sources can not be taken at face value for the different settlement regions and phases of the Lombards in Lower Austria. The archaeological analyses of some long-known Longobard burial sites are bringing new information to this discussion.

10th-Century Visegrád (HU). Continuity of the Early Medieval Centre?

The presented paper aims to summarize the results of settlement archaeology at the micro region of Visegrád, an early medieval centre (Visegrád-Sibrik domb) and its suburbs (Visegrád-Várkert dűlő). My analysis and the radiocarbon data confirmed the chronology of the site complex, from the late 8th - 9th century to the late Árpád Age (13th century); however, the 10th-century horizon and the continuity are still problematic. Collecting data from the micro region contributed to a better understanding of the early preurban development; the results definitely showed at least local continuity of the clarified settlement hierarchy. This observation points to the newly raised supposition that one of the earliest centres of the Hungarian Kingdom, which had developed to be a cornerstone of the so-called 'Medium regni', that is, the Hungarian royal core area in the Árpád Age (11th - 13th century), had an (early) Carolingian Age antecedent.

An Early Medieval Settlement in Baranja: Beli Manastir – Sudaraž

The 2015 rescue excavations at the site of Beli Manastir – Sudaraž unearthed seven early medieval residential structures with rectangular or trapezoidal floor plans. The structures exhibit a more or less regular layout, concentrated in a constricted area. They have shallow foundations, vertical or slightly slanting walls, and a flat bottom, and most of them contain traces of construction elements – column pits and fireplaces in the corners. There are two spatial units in proximity to these residential structures, with high concentrations of pits including pottery fragments similar to the ones recorded within the structures. This type of grouping indicates that this settlement had a planned organization.

The residential structures' interiors yielded fragments of pottery vessels, as well as a small number of bone, stone, and metal finds. One interesting find is the burial of a dog in the fireplace of one of the structures. The surrounding pits yielded slightly more artefacts than these structures. Given that the vessel fragments do not exhibit traces of manual production or the fast-turning pottery wheel, it can be concluded that the vessels were produced on the slow-turning pottery wheel. Various types of decorations were recorded on the pottery fragments (horizontal lines, single and multiple wavy lines, decorations made by a comb-like object, and roulettes), indicating they originated roughly between the 10th and 12th centuries. The analysed group of animal remains finds almost exclusively includes domestic animals, predominantly horses and cattle, with young pig and the aforementioned dog burial making up a smaller portion of the finds. The remains of wild game are extremely rare and usually include sawed-off horn fragments, implying that they were used as material rather than being food waste.

Research results offer new data on the typological diversity of the medieval residential structures and insight into the shapes of an early medieval settlement in Eastern Croatia.

The Central Balkans Events in the 810–820s: Pliska's Point of View

Following the attacks by the Franks and Bulgars in the late 8th and early 9th centuries, the Avar Khaganate collapsed. The Avars fled westward and were re-settled by Charlemagne in a kind of reserve. In the wake of their departure, the Slavic tribes previously under Avar control began attempts to form their own early state structures. As a result, two rival Croatian entities emerged in the Western Balkans, along with an initial attempt to establish a Serbian polity.

In this context, tensions arose along the western borders of the Bulgarian state, particularly with certain Slavic tribes that had previously been its allies. Among these were the Timochiani and the Abodriti–Praedenecenti. These groups (especially the Timochiani) would go on to play a role in the regional struggles to establish new states in the Western Balkans. Given the Bulgarian state's strategic interest in the fate of these tribes, their activities during this period were of direct concern to Pliska.

Creating a Typochronological System for the Eastern Alps and Its Synchronization with Pannonia

The phases of so-called archaeological cultures, cultural circles, cultural groups, time stages, and time horizons are interpretative tools that have become more and more abandoned in recent decades. The simultaneous treatment of groups of shape types due to their assumed temporal homogeneity has reached the limits of its interpretative potential, and absurd situations are multiplying. The IT tools available to us today enable the individual treatment of each object, each shape type, each grave, and each site. A network of relationally connected information is being established, which is, although flexible, increasingly solid. Using the example of the Župna Cerkev site in Kranj, we show the mutual dating of graves and objects, which is calibrated with stratigraphic relations and stratigraphic sequences. The general results are the time ranges of shape types of jewelry. This opens up the possibilities of chronological synchronization with neighboring territories.

More than four decades ago, Jochen Giesler divided the early medieval jewellery of the Eastern Alps into three time horizons and proposed their absolute chronology, which he based primarily on the Pannonian chronology that he established for this purpose. A comparison of his shape types with the current, much more differentiated scheme shows that the typochronological contact of the two areas, as he presented it at the time, is based on one single object. This is a completely useless basis for the absolute chronology of Eastern Alpine jewellery, as he proposed. A number of authors have already established that it is inadequate, and we now know what led him astray.

Selected sites from various neighboring territories with the individualized treatment of objects, graves, and the determination of time ranges for individual shape types now allow a new and solid synchronization, both relatively and absolutely chronologically.

A Byzantine Shipwreck Cargo at Cape Stoba, Island of Mljet

The Byzantine shipwreck at Cape Stoba, island of Mljet, was discovered in the early 1960s by local divers and had consequently been severely devastated until the first inspection by the experts in 1975. Underwater archaeological investigations of the site were conducted between 2009 and 2015 by the Croatian Conservation Institute's Department for Underwater Archaeology and the Department of Humanities of the Ca' Foscari University of Venice. It was found that this was a first half of the 11th-century shipwreck carrying a large cargo consisting of Byzantine amphorae and luxury glassware produced in the workshops of the Eastern Mediterranean. The area of approximately 100 m² yielded over two hundred amphorae and plenty of glassware, as well as the ship's rig and inventory. The cargo included a wide variety of Middle Byzantine amphorae, making this one of the most significant sites for establishing the typology and chronology of Byzantine amphorae on the Mediterranean.

Necropolises from the 9th-10th Centuries in the Northern Area of the Lower Danube and in Dobruja (The Stage of the Research)

The study of necropolises dated to the 9th-10th centuries on the present-day territory of Romania began in the 1950s-1960s. Most of the discoveries were made by chance and belong mainly to the 1970s and 1980s. However, the interest in studying such cemeteries gradually diminished in the following period. This is due to the fact that after 1989, the interest of archaeologists focused on certain sites considered to be of greater importance, but it is also the result of the lack of specialists for this chronological segment.

Even in the previous period, it can be observed that most of the necropolises dated to the mentioned time span were not researched by archaeologists specialized in the study of the Middle Ages. Many investigations were prompted either by works of economic importance or by the tombs that appeared in the area of pre-historic or classical period sites. Being also a less-known chronological interval, it is very likely that the political factor also played a certain role, the necropolises being at that time quite delicate to attribute to one population or another. According to the directions coming from higher forums, the archaeologists specialized in the study of the Middle Ages have to find the "Romanian" population and to avoid making too many statements on other possible populations, especially those who arrived here from other areas. If such topics were nevertheless discussed, they had to be approached through the lens of "party indications", and it was necessary to be somehow integrated into the landscape considered to be autochthonous, possibly of Roman tradition.

The territory chosen for the study is situated between the Iron Gates and the Danube's confluence into the Black Sea, namely the actual regions of Oltenia, Wallachia, and Dobruja.

Although the analysed area at that time belonged to several states, namely the Bulgarians (9th and part of the 10th century), the Byzantine Empire (Dobruja or the territory between the Danube and the Black Sea during the reign of Emperor John Tzimiskes, after 971), and then it was also occupied by the Pecheneg tribes and Sviatoslav, the material culture of the people who lived here was quite diverse. At that time, the local population was also attested in historical sources, regardless of what it was. We must not forget the colonization of the population in the Adrianople area in the 9th century by the Bulgarian khan Krum in 813.

Since that period, several necropolises located mainly along the Danube have been partially or fully investigated. Unfortunately, the number of studied sites still remains extremely small. Thus, we would like to mention the necropolises discovered at Obârșia (Olt County), Sultana and Chirnogi (Călărași County), Platonești (Ialomița County), Izvoru (Giurgiu County), Buceag, Basarabi, Mircea Vodă, Capi-dava (Constanța County), Piatra Frecăței (Tulcea County), etc. Some of these necropolises are bi-ritual.

Most cemeteries are published as excavation reports, but some of them were also published as monographs (Platonești or Piatra Frecăței, for example). Uwe Fiedler also published a paper in 1992, dedicated to the necropolises of the studied period, both for the territory of present-day Bulgaria and for that of Romania. Syntheses exclusively dedicated to necropolises dated to the 9th-10th centuries for the territory of Romania are almost missing, with the exception of a volume dedicated to southern Romania during the 8th-11th centuries, in which these discoveries were also briefly analysed, and another, of small dimensions, that analyzes the necropolises dated to the 8th-10th centuries.

Vaćani – Grlo: New Research of the Early Medieval Cemetery in the Šibenik Hinterland^{*}

Vaćani is a small village situated between Skradin and Bribir. Despite its current modest size, it is well-known in Croatian archaeology, since there are two early medieval cemeteries in the area of this village. The older cemetery is located at the Laluše site, situated at the entrance to the village next to the Skradin–Bribir road. This site was investigated by the Šibenik City Museum from 2011 to 2014, when 18 graves were discovered, two of which are notable for their interments in stone sarcophagi. The cemetery is dated to the second half of the 8th and the first half of the 9th century. The second cemetery is located at the Grlo site, on the edge of the field, above the aforementioned road. Rescue excavations were conducted by the Šibenik City Museum in 2004, yielding four devastated graves. New research on the site was carried out by the Institute of Archaeology at the end of 2024, when a total of 18 graves were investigated. Thirteen graves were found to belong to the interments of small children, one is the burial of an individual between 16 and 18 years of age, and only four are the interments of adult female individuals. The complete absence of adult male burials is noteworthy. Finds were recovered from nine graves—specifically, the burials of three adult individuals, one adolescent, and five children. These mainly include jewelry, consisting of bronze and silver circlets. These finds, alongside the ¹⁴C analysis, date the graves to the 11th and the beginning of the 12th century.

* This work was created as part of an internal project of the Institute of Archaeology Medieval communities on the eastern Adriatic coast through the prism of interdisciplinary cemetery research (MedComm) financed by the European Union - NextGeneration EU (NPOO).

A New Interpretation of the Carolingian Coins from Northern Dalmatia

The northern Dalmatian finds of Carolingian denarii are extremely rare, but despite that, these coins are considered proof of the great influence of the West in the formation of the Croatian political elite, i.e., of the Frankish Empire as the political incubator for the creation of the early medieval Croatian state. Three coins have been discovered thus far: a Charlemagne denarius from Bribir, Louis the Pious' denarius from the Church of St. Martin in Lepuri, and Lothair I's denarius from the early Croatian cemetery at Ždriljac, Nin. The latter numismatic artefact has acquired almost mythological significance in the Croatian scientific literature. The authors of this paper see almost no Carolingian influence in these coins. That is, there is absolutely no proof that a coordinated or orchestrated Carolingian monetary policy that could be linked to money intended specifically for the needs of the Croatian princely elites ever existed. As has already been emphasized, this is indicated especially by the very small number of Frankish denarii discovered in Northern Dalmatia. We believe they are only the consequence of trade connections with the location of their origin, i.e., Northern Italy. The same goes for the somewhat later coins of the Holy Roman Empire, i.e., Otto the Great's coin from Asseria and Otto III's coin from Sukošan. In fact, the topographic, typological-chronological, and statistical analyses of the abundant numismatic material from this area indicate that the most common coins circulating in the early Croatian state belong to the currency of the Byzantine Empire, as testified by the two exceptionally strong influxes of golden coins, first during the reign of Constantine V, the second during Romanos III Argyros. In short, all other early medieval numismatic finds, such as the Carolingian ones, in Northern Dalmatia are merely peripheral phenomena.

The Textile Heritage of Early Medieval Croatia through the Prism of Grave Goods

Like most organic materials, textiles are prone to rapid decomposition, due to which they are very rarely discovered in archaeological contexts outside the areas with special climatic conditions, such as deserts or very cold, water-soaked areas typical of Northern Europe. Conversely, in the areas with mild and wet climates, typical of most of Europe, including Croatia, textile disintegrates quite rapidly, making garments preserved completely and in their original function quite rare. Regardless of that, small fragments preserved in the organic and more commonly mineralized state (connected with metal objects such as belt buckles, knives, buttons, earrings, coins, etc.) can provide an insight into the type of textile they are made of and its texture. Sometimes they can even reveal the structural details that can help determine their shape, function, and technology in their production. The early medieval cemeteries in Northern and Central Dalmatia, i.e., the sites of Crkvina in Biskupija, Ždrijac in Nin, Klarića Kuće in Stankovci, Rupotine in Rižinice, Laluše in Vačani, Međine in Plavno, the Spas Hill above Knin, and in the somewhat chronologically and regionally related cemeteries at Gorica in Stračani, Vinodol, and Žminj in Istria yielded several dozen textile finds, mostly simple fabrics in plain or twill weave. Some of these fabrics were preserved in their organic and some in their mineralized state due to contact with metal objects. These sites also yielded five fragments of a luxury textile made by twisting the silk yarn wrapped in gilded silver threads together. Being the final product of a complex and lengthy process, textiles not only provide information on various phases of the process and tools used in their production, but they can also offer a glimpse into trade, ceremony, art, and personal identity.

A Tale of Medieval Skulls: Bioarchaeological Examination of the Crania from the Vukovar – Lijeva Bara Cemetery (10th/11th c. CE)

The Vukovar – Lijeva Bara cemetery is one of the most important and by far the largest burial site of the Bijelo Brdo cultural complex in Croatia. Although the site has been known since the end of the 19th century, the first (and only) systematic excavations took place between 1951 and 1953. The excavations yielded large amounts of archaeological material from different contexts (settlements and cemeteries) and periods (the Neolithic, Bronze and Iron Ages, medieval period). Probably the best-known find was the discovery of a large early medieval cemetery (10th/11th century) with 438 burials associated with the Bijelo Brdo cultural complex. This is a typical row cemetery with horizontal stratigraphy where the deceased were laid on their back in simple grave pits oriented in a west-east direction. About half of the graves contained grave goods, mostly found in female burials. These consist of items for everyday use, such as knives and flints, parts of costumes (fittings and buckles), and weaponry (quivers, bows, and arrow-points), as well as jewellery (different types of circlets, rings, necklaces, earrings, pendants, bracelets) and pottery fragments.

A recent revision of the Anthropological Collection of the Croatian Natural History Museum brought to light partial remains of 150 skeletons from Vukovar – Lijeva Bara. Therefore, the main aim of this paper is to present the results of conventional bioarchaeological analysis of cranial remains belonging to individuals buried at one of the most important early medieval cemeteries in Croatia for the first time. We will present preliminary biological data concerning demography and mortality, non-adult health, dentoalveolar disease, and skeletal trauma from this site. Considering the importance of the Vukovar – Lijeva Bara cemetery for Croatian archaeology, this information will reveal previously unknown details about the biological history of this early medieval community, but will also significantly enrich our knowledge about the everyday life (and death) of the people inhabiting this part of Europe over a millennium ago.

List of participants

Balić, Edina

Edina Balić
Pod mikroskopom, obrt za konzervaciju-restauraciju
Vinogradska 123
33520 Nova Bukovica, Croatia
edina.podmikroskopom@gmail.com

Bedić, Željka

Željka Bedić, PhD
Centre for Applied Bioanthropology, Institute for Anthropological Research
Ljudevita Gaja 32
10000 Zagreb, Croatia
zeljka.bedic@inantro.hr

Filipčić, Dejan

Dejan Filipčić, mag. archaeol. et historiae
Izidora Kršnjavoga 10
47000 Karlovac, Croatia
filipi.dejan@gmail.com

Filipec, Krešimir

Krešimir Filipec, PhD
Archaeological Institute of the Faculty of Humanities and Social Sciences
University of Zagreb
I. Lučića 6
10000 Zagreb, Croatia
kfilipec@m.ffzg.unizg.hr

Goss, Vladimir P.

Vladimir P. Goss, Professor Emeritus
University of Rijeka
Trg braće Mažuranića 10
51000 Rijeka, Croatia
vgoss@aol.com

Hosszú, Gábor

Gábor Hosszú, PhD
Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics, Department of Electron Devices
Magyar tudósok körútja 2
H-1117 Budapest, Hungary
hosszu.gabor@vik.bme.hu

Hrissimov, Nikolay

Nikolay Hrissimov, PhD
"St Cyril and St Methodius" University of Veliko Tarnovo
Department of Ancient and Medieval History
Teodosij Tărnovski St No 2
5003, Veliko Tărnovo, Bulgaria
nikolaj.nikolov@ts.uni-vt.bg ; hrissimov@gmail.com

Hristov, Yanko

Yanko M. Hristov, PhD
Department of History
South-West University "Neofit Rilski"
66 Ivan Mihaylov Str.
2700 Blagoevgrad, Bulgaria
yanko.hristov@swu.bg ; hristiqnko@gmail.com

Hršak, Tomislav

Tomislav Hršak
Archaeological Museum Osijek
Trg Svetog Trojstva 2
31000 Osijek, Croatia
tomislavhrsak@gmail.com

Ilkić, Mato

Mato Ilkić, PhD
Department of Archaeology
University of Zadar
Obala kralja Petra Krešimira IV, 2
23000 Zadar, Croatia
milkić@unizd.hr

Jarak, Mirja

Mirja Jarak, PhD
Department of Archaeology, Faculty of Humanities and Social Sciences
University of Zagreb
Ivana Lučića 3
10000 Zagreb, Croatia
mjarak@m.ffzg.hr

Kmetič-Marceau, Emil

Emil Kmetič-Marceau
Archaeological Museum of Istria
Carrarina ulica 3
52100 Pula, Croatia
emil.kmetic@ami-pula.hr

König, Tomáš

Tomáš König, PhD
Comenius University in Bratislava
Faculty of Arts, Department of Archaeology and Cultural Anthropology
Gondova 2
811 02 Bratislava 1
Slovakia
tomas.konig@uniba.sk

Krznar, Siniša

Siniša Krznar, PhD
Institute of archaeology
Jurjevska ulica 15, 10000 Zagreb, Croatia
skrznar@iarh.hr

Lovrinčević, Antonio

Antonio Lovrinčević
Archaeological Museum Osijek
Trg Svetog Trojstva 2
31000 Osijek, Croatia
antonio.lovrincevic@amo.hr

Martinčić, Ozana

Ozana Martinčić, MS
The Miroslav Krleža Institute of Lexicography
Frankopanska 26
10 000 Zagreb, Croatia
ozana.martincic@lzmk.hr

Merva, Szabina

Szabina Merva, PhD
Independent researcher
filomenaa108@gmail.com

Novak, Mario

Mario Novak, PhD
Centre for Applied Bioanthropology, Institute for Anthropological Research,
Ljudevita Gaja 32
10000 Zagreb, Croatia
Department of Archaeology and Heritage, Faculty of Humanities
University of Primorska,
Titov trg 5, 6000 Koper, Slovenia

Nowotny, Elisabeth

Elisabeth Nowotny, PhD
Center for Museum Collections Management
University for Continuing Education Krems
Dr.-Karl-Dorrek-Straße 30
3500 Krems an der Donau, Austria
elisabeth.nowotny@donau-uni.ac.at

Oța, Silviu

Silviu Oța, PhD
National Museum of Romanian History
Calea Victoriei, nr. 12, sect. 3,
Bucharest, Romania
silviuota@yahoo.com

Rapan Papeša, Anita

Anita Rapan Papeša, PhD
Vinkovci Municipal Museum
Trg bana Josipa Šokčevića 16
32100 Vinkovci, Croatia
anita@muzejvk.hr

Pleterski, Andrej

Andrej Pleterski, Prof. ddr., Emeritus
Scientific Research Centre of the Slovenian Academy of Sciences and Arts
Novi trg 2
1000 Ljubljana, Slovenija
Pleterski@zrc-sazu.si

Profantová, Naďa

Naďa Profantová, PhD
Institute of Archaeology of the Academy of
Sciences of the Czech Republic
Prague, v.v.i. Letenská 4
118 01 Prague 1, Czech Republic
profantova@arup.cas.cz

Radović, Siniša

Siniša Radović, PhD
Institute for Quaternary Palaeontology and Geology
Croatian Academy of Sciences and Arts
Ante Kovačića 5
10000 Zagreb, Croatia
sradovic@hazu.hr

Rihter, Jernej

Jernej Rihter, PhD
Institute of Archaeology ZRC SAZU
Novi trg 2
1000 Ljubljana, Slovenija
jernej.rihter@zrc-sazu.si

Sinobad, Marko

Marko Sinobad
Ministry of Culture and Media
Regional Conservation Service Šibenik
J. Čulinovića 1/3
22000 Šibenik, Croatia
Marko.Sinobad@min-kulture.hr

Sokol, Vladimir

Vladimir Sokol, PhD
Ulica kralja Zvonimira 7
10000 Zagreb, Croatia
sokol.vladimir.zg@gmail.com

Szabó, Géza

Géza Szabó
Wosinsky Mór Museum,
Szent István tér 26
7100 Szekszárd, Hungary
kaladeaa@gmail.com

Takács, Miklós

Miklós Takács, PhD
MTA Bölcsészettudományi Kutatóközpont Régészeti Intézet
Úri u. 49.
1014 Budapest, Hungary
takacs@archeo.mta.hu
takacs.miklos@btk.mta.hu

Ungerman, Šimon

Šimon Ungerman, PhD
Institute of Archaeology
Czech Academy of Sciences
Čechyňská 363/19
602 00 Brno
Czech Republic
ungerman@arub.cz

Vulić, Hrvoje

Hrvoje Vulić
Vinkovci Municipal Museum
Trg bana Josipa Šokčevića 16
32100 Vinkovci, Croatia
hrvoje@muzejvk.hr

Zelliger, Erzsébet

Erzsébet Zelliger, PhD
ELTE Eötvös Loránd University, Faculty of Humanities,
Department of Hungarian Historical Linguistics, Sociolinguistics and Dialectology
Múzeum krt. 4/A
1088 Budapest, Hungary
zelliger.erszsebet@btk.elte.hu

Zmaić, Vesna

Vesna Zmaić
Croatian Conservation Institute
Department for Underwater Archaeology
Cvijete Zuzorić 43, 10000 Zagreb
vzmaic@hrz.hr

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.