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Reconstruction and Making Archaeological Sites Available to the Public – the Case of the Early Medieval Sites in Nitra and Bojná

ABSTRACT

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Great Moravian monuments have attracted special attention of both professionals and laypeople for a long time. In this paper we focus on only two of the Great Moravian sites studied at the Institute of Archaeology, Slovak Academy of Sciences (IA SAS). One of the locations is Nitra, the former seat of Great Moravian dukes and Hungarian kings founded in 828. In the 9th century, the town was a large political and cultural centre. Relics from this period (such as remains of fortifications and sacral buildings) can be found on the castle hill and in the area of old military barracks situated in the foothills of Zobor. Unfortunately, some of the relics have been irreversibly lost due to the intense growth of the city and related construction activities. The second site is Bojná, with an agglomeration of five earth fortifications. The most significant of these is a twelve-hectare hillfort of Valy, where we have reconstructed or marked the most interesting historical constructions *in situ*. Here, visitors can see reconstructions of one of the gates, fragments of the impressive fortifications, and dwellings located inside the hillfort. In the village centre, they can also visit an archaeological museum. Each year, thanks to successful cooperation with local communities and representatives of municipalities, the sites and their history are revived during Nitra Days or the St. Cyril and Methodius Day.

Keywords: early medieval hillforts, revitalisation, open-air museum, virtual reconstruction, popularisation

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Introduction

The beginnings of the Middle Ages, or at least the part of history associated with Great Moravia, belong to the most important and still

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studied periods of the history of both the Slovaks and the Czechs¹. The significance of this period for our national history is also confirmed by a reference included in the text of the preamble to the Constitution of the Slovak Republic and by the popularity of the St. Cyril and Methodius Day (July 5). Therefore, here, research combines the interests of both scientists and laypeople and provides opportunities for making research work more visible, for popularising knowledge about history, and for protecting historical monuments. This process can be inspired by studies on Christianisation and the vision of the Great Moravian State as the foundation for the former common state uniting both of the nations – Czechoslovakia. In particular, waves of curiosity were sent by discoveries of prominent power centres in Slovakia and especially in Moravia in the 1950s.

Naturally, these sites attracted the attention of archaeologists, who still today perform long-term, systematic excavations there. The interwar period witnessed the first attempts to protect and preserve the oldest medieval monuments and to make them available to the public. Compared with well-preserved monumental Moravian sites abounding in relics of the oldest sacral architecture, archaeological studies in Slovakia have been hampered by the continuous character of settlement in most of the main historical centres. This, in turn, has resulted in severe damage of the older architecture and often in irreversible destruction of Great Moravian settlements. Nevertheless, modern archaeology has significantly changed the picture of this period. In the 1960s and 1970s, archaeologists discovered further significant Great Moravian finds. Fragments of stone architectures found at Bratislava Castle, together with foundations of a basilica, have been the first to be presented directly “on site”. Furthermore, a new type of an early medieval settlement – a court with a church – has been discovered in Nitrianska Blatnica. The preserved relics of the settlement can also be admired today.

Although the long-term study on the Nitra agglomeration has focused mainly on its peripheral parts, it has also brought interesting discoveries on the St. Martin’s Hill (Martinský vrch), including relics of a pre-Romanesque sacral facility. Thirty years ago, in 1988, after a long break, research on Nitra Castle was resumed and has continued to this day. In the 1980s, a re-examination in Devin allowed researchers to identify

¹ This study was conducted with the support of the APVV 14-0842 and VEGA 2/0175/16 projects (ratio: 1:1).

a Great Moravian sacral facility and provided sufficient information for preparing its presentation in the historical area of the castle.

In the 1990s and at the beginning of the new millennium studies on the most significant sites accelerated. At the same time, new research methods allowed scientists to focus their attention also on other, previously unexplored or unknown sites. Remarkable results were achieved during studies on the oldest phases of the church of St. Margaret of Antioch in Kopčany, which belonged to the Great Moravian agglomeration of Mikulčice (Baxa *et al.* 2004). Further important findings have emerged after re-examinations in Majcichov, Bíňa, Svätý Jur, Nitrianska Blatnica and Bratislava. However, in the case of Bíňa and Nitra the precise dating of the oldest early medieval fortifications remains uncertain (Henning and Ruttikay 2011; Bednár and Ruttikay 2018). These studies relied on the results of new excavations and on the application of modern dating methods and often refined and redefined older beliefs about the beginnings of these settlements (Ruttikay 2012; 2017; Henning *et al.* 2017). Similar aims have guided more recent studies – for example those in Zemplín (Ruttikay 2017, 171–172), Majcichov (Henning *et al.* 2017, 337–340), Zvolen-Môťová (Beljak *et al.* 2018), Svätý Jur (unpublished), and Divinka (Fusek 2017). Refining the information about specific locations also fundamentally changes the possibilities of an objective interpretation of these sites in a wider context. Furthermore, this opens new perspectives on the historical, political and economic processes in the eastern part of Great Moravia at the time of its existence or after its gradual fall. The strongholds already dated using natural methods inform us that a relatively high intensity of construction works concentrated at the end of the 9th century or at the beginning of the 10th century. The second peak of these activities took place later, in the first half of the 11th century. The recent intense archaeological research revealed that the collapse of Great Moravia in the Nitra Valley was not a clear-cut or abrupt event that corresponded to a total destruction of the entire region and its economic foreland. We should also keep in mind that the “traditional” and persistently repeated dating of numerous sites back to the turn of the 8th and 9th centuries failed to be confirmed. As a consequence, we are forced to communicate these findings in a form “acceptable” to a wider public.

Nitra

Thanks to its history, Nitra is an ideal place to present unique monuments dated to the Early Middle Ages and to the beginning of the High Middle Ages. It possesses a relatively good cultural and historical (87 historical relics, including 6 archaeological sites, 72 buildings, historical urban zone, city monument reserve “Hrad”, and a historical festival “Pribinova Nitrawa”) as well as scientific potential (seat of IA SAS).

One of the available options is a museum. Unfortunately, after one of the most beautiful archaeological exhibitions in Slovakia had to be closed at the beginning of the 1990s, the Ponitrianske Museum was forced to move to inappropriate premises and is still waiting for the construction of a new facility and new exhibitions. The lesser known, though biggest, archaeological exhibition in Slovakia presented at the Slovak Agricultural Museum in Nitra is in a slightly better situation. However, traces of early medieval history can be seen nearly everywhere in the city. At the end of the previous century archaeological motifs were used to decorate drain covers and other details in the Nitra Old Town. An enlarged replica of the so called Blatnica sword, stuck in the pavement in front of the museum, also serves as a tourist attraction.

Compared to other contemporary early medieval centres, such as Mikulčice or Bojná, Nitra has one big disadvantage – it is still inhabited. Many of the original features were damaged by later constructions or during land levelling. As a consequence, all attempts to reconstruct the oldest phases of the castle hill remain hypothetical. Many other ones are hidden deep under thick layers of soil. For example, we placed great hopes in the study on the so-called lower nave of the cathedral church on the castle hill. Unfortunately, the interior space had been secondarily dug into the rock and thus traces of the medieval development of the site were irreversibly lost. All this reduces the effectiveness of archaeological research. Nevertheless, Nitra is a site with probably the densest 9th–12th-century settlement in entire Slovakia, unique also in the entire Central European region.

In the mid-1990s, there was a big discussion about making the Great Moravian, early medieval, fortification on the western slope of the castle hill available to the public. Unfortunately, the idea has never been realised. The results of excavations at the construction site of the Nitra Gallery, where a Romanesque castle gate was discovered, gained



Fig. 1. Nitra, castle, eastern casemate – exhibition presenting the development of the castle fortifications (Photo by M. Ruttkay; archives of IA SAS)

great publicity. Again, also here great expectations of laypeople and professionals were not fulfilled and massive architectural structures were gradually being lost due to inertia and building activities. The situation changed in 2005 when the IA SAS, the Diocese of Nitra, and the City of Nitra started making the archaeological heritage available to the public. The first step included an exhibition “From Great Moravian rampart to Baroque bastion” (Od veľkomoravského valu k barokovému bastiónu). Here, visitors can literally touch the original Great Moravian ramparts and see the late Gothic, Renaissance, and Baroque fortifications (Fig. 1).

Gradually, a whole series of research projects was carried out in the palace and in St. Emmeram’s Cathedral (Bednár and Ruttkay 2018). The results of the excavations are now available to the public. These, in particular, include a system of newly discovered niche seats in the northern wall of the lower church and the discovery of one of the oldest pieces of masonry in the southern wall of the lower church, next to the sacristy. Great attention was also attracted by the opening



Fig. 2. Nitra, Martinský vrch – presentation of foundations of the oldest phase of the church marked with stones placed on the surface (Photo by M. Ruttkay; archives of IA SAS)

of the examined underground cellars below the western part of the main gate with preserved fragments of a Romanesque palace (Ruttkay 2015, Fig. 18). The most recently presented attractions include the main parts of the Romanesque fortifications in the eastern part of the castle area discovered during the construction of the Castellum cafe (Ruttkay 2015, Tab. X: 1). The internal side of the fortifications still has retaining walls, most likely supporting a walkway. The upper part of the fortifications – the battlement – is clearly visible in the north wall of the northern bastion.

In 2005 the IA SAS resumed research in the area of the former military barracks at St. Martin's Hill. After the army had left the facility in 2008, some of the buildings were acquired by the Institute of Archaeology SAS and others were taken over by the City of Nitra, while most of the plots still belong to the Diocese of Nitra. Gradually, the idea of making the area available to the wider public was born. The idea was to create an open-air museum, which, apart from performing museum and educational functions, could also serve as a workshop



Fig. 3. Nitra, Martinský vrch – view of the part of the archeological park presenting the Great Moravian period (Photo by M. Ruttkay; archives of IA SAS)

for experimental archaeology. The urban plan approved in 2013–2014 assumed that the archaeological park would cover nearly 6 hectares. A year earlier, the IA SAS had prepared an on-site presentation of the foundations of the oldest phase of St. Martin's Church (Fig. 2) and then initiated the construction of other parts of the open-air museum – a Great Moravian settlement (Fig. 3). Relying on the original findings from the 1960s, we have built three sunken houses and a bread furnace, although in slightly modified locations. As a model for the functioning replica of a pottery furnace we used a find from the Nitra-Lupka site. Later, we plan to allocate fields for the cultivation of historical crops. Unfortunately, so far, the site is not opened on a regular basis, but we believe that the situation will change once the historical buildings on the premises are finally reconstructed. Certainly, the situation will change once the Centre for Science Popularisation is built, devoted also to archaeology and its relations with natural and technical sciences (DNA, analysis of trace elements, mining archaeology, geophysics, environmental studies, conservation and restoration).



Fig. 4. Nitra, Martinský vrch – reconstruction of the oldest, pre-Romanesque phase of the church (Designed by A. Arpaš, M. Ruttkay; archives of IA SAS)

In recent years, we have been focusing on the development of various digital reconstructions and visualisations. Some of this work was performed within the framework of the CEVNAD project which, however, had specifically scientific objectives. Currently, the work is performed within the scope of the Virtualarch project (Interreg programme) aimed directly at the promotion of “invisible” – decaying or hidden under the ground – sites. We have prepared a series of visualisations, many of which are available on our website (<http://archeol.sav.sk/index.php/sk/virtualna-archeologia/>). Further attractions, such as extended reality experiences, will be available directly on site through a mobile application.

One of the first examples of such activities is a digital documentation of St. Martin’s Church in Nitra, St. Martin’s Hill (Fig. 4; Ruttkay 2015, Tab. VIII). A new visualisation shows the redrawn and corrected foundations of the church – an older drawing published by B. Chropovský mistakenly merged a western baroque extension with the early medieval foundations. Reconstructing the above-ground elements, we let ourselves be inspired by the reconstruction of the church in the village of Modrá near Velehrad, Czech Republic.

Unfortunately, due to the lack of sufficient original foundations, reconstruction of the palace or the sacral facility dated to the Great

Moravian times on the castle hill would be premature. On the other hand, however, we have sufficient data for performing reconstructions related to the Romanesque period. In the future, we would like to present this visualisation in the form of extended reality (ER).

Bojná

The archaeological finds in the village of Bojná, Topolčany District, in Western Slovakia, or more precisely their dominant part, the national cultural heritage site – Hradisko Valy (Valy hillfort), have aroused widespread curiosity as a site where relics of the oldest national history have been found. The unique significance of these finds in the entire European context is reflected in the fact that in 2013 they were presented in the Vatican Museums in Rome during an exceptional exhibition dedicated to the 1150th anniversary of the evangelisation of Great Moravia by Saints Cyril and Methodius. Soon, the Bojná-Valy hillfort became the main tourist attraction in the region. A great advantage of the Bojná fortifications is the fact that they are well preserved in a remote forest area. Their relics can be seen and visited still today – in the form of clearly visible ramparts and gates. Since 2007 a working team of the Institute of Archaeology SAS has worked there and performed successful, systematic studies. The results of these studies were presented in books (Pieta and Robak 2017a; 2017b) and at various domestic and international exhibitions organised in cooperation with the village of Bojná. Finally, information about the site and its history is provided to the visitors by the Great Moravia Archaeological Museum in Bojná (Fig. 5).

We can obtain a lot of information about the time of the construction and the appearance of the structures through studying wood burnt during a fire that took place sometime at the turn of the 9th and 10th centuries. These relics of wooden constructions allowed archaeologists to identify the building techniques and processes used by the builders and then to relatively faithfully reconstruct the original appearance of the fortifications. Inside the gate we have found well preserved bottom parts of burnt vertical and horizontal wooden constructions. The front part of the southern wing, including partially damaged elements of the internal corridor of the gate, has eroded. Water flowing down the road from the hillfort interior washed out and lowered the ground. However, the modern entrance to the hillfort was modified. The original, still



Fig. 5. Bojná, The Great Moravian Archaeological Museum (Photo by K. Pieta; archives of IA SAS)

visible route approached the gate indirectly, below the northern wing of the gate and then turned south again. The northern wing of the gate has been preserved up to 420 cm. Its soil embankment was strengthened with eight wooden beams. The embankments of both wings of the gate were framed with braid (basketwork) wrapped around a dense row of posts. A pair of stone-walled postholes located in the southern, front part of the gate provides an impression about the construction of the gate doors. Unfortunately, the opposite, northern part of the gate has been damaged by erosion. We assume that the width of the narrowed front part of the entrance was approximately 400 cm.

In our opinion, the significance, location, widespread interest as well as results of the systematic research on the suddenly destroyed construction provide good foundations for a more extensive reconstruction of the Valy hillfort (Pieta and Robak in print). After a substantial discussion, this view was shared by employees of the Monuments Board of the Slovak



Fig. 6. Bojná I – Valy. Experimental reconstruction of dwellings (Photo by K. Pieta; archives of IA SAS)

Republic, landowners, and representatives of the village. The overall idea of making the results available to the public assumes that the hillfort will be preserved in its natural environment. Visitors will walk along an educational walkway linking the most important parts of the fortification, buildings, and reconstructions of selected structures. A detailed lecture, animated 3D reconstruction and numerous appealing finds can be seen in the already mentioned museum located in the centre of village.

Since 2012, the historical premises of the hillfort have gained three Slavic residential log houses – sunken houses with stone furnaces – reconstructed on site (Fig. 6). The construction of structures for which we lack archaeological evidence (such as rafters or internal furnishings) had an experimental character and relied on results obtained in other contemporary European sites. As a result, we have proceeded with reconstructing (or at least marking on site) further residential and other constructions, and a stand-alone bread furnace.



Fig. 7. Bojná I – Valy. Current state of the reconstructed eastern gate of the hillfort (Photo by K. Pieta; archives of IA SAS)

The massive, nearly 2,000 m long, wood-and-soil fortifications of the Valy hillfort have been studied in several places. The research provided information about the internal construction and allowed obtaining reliable dendrochronological data about the origins of the fortifications (Pieta and Robak 2017a). A cross-section of the fortifications, close to the western gate, has been used to reconstruct one wooden chamber of the rampart together with a stone shell and a wooden palisade. Finally, the fortifications also contained a ditch with a fence protecting it from the front.

Of the hillfort's three entrances, the eastern gate has been studied the most thoroughly. We have found there well-preserved remains of burnt wooden constructions of the gate and both inward opening doors. The results became an inspiration for reconstructing the extensive and complex gate architecture mentioned above. In addition to technical and constructional solutions, the reconstruction project also relied on historical analogies and took into account the military and defensive function of the gate. Immediately, the monumental object with a two-



Fig. 8. Bojná I – Valy. Bojná I – The annual Saints Cyril and Methodius' Day (Photo by K. Pieta; archives of IA SAS)

storied tower not only became a new and appealing symbol attracting visitors to this site, but also initiated debates about possibilities and limits of archaeological reconstructions (Fig. 7).

Apart from the Valy hillfort, Bojná also has other attractions important from the point of view of popularising archaeological monuments that could be open to cultural tourism. So far, research activities have been focused mainly on the oldest part of this large settlement agglomeration – Bojná III – Žihlavník, a hillfort with an elevated Slavic settlement dated to the 7th–8th century and a cemetery with burial mounds from the 9th century. Lidar documentation and excavations helped us reconstruct an exceptionally complex system of fortifications consisting of a double perimeter wall, a ditch, and external defensive structures that – so far – have no analogies in our milieu. Inside the hillfort we have excavated two burial mounds dated to the Great Moravian period. Since the site is

intended to become an open monumental tourism precinct, the explored plots as well as the caps of both mounds were restored to the original state.

The research performed in Bojná is becoming a model for combining systematic exploration of an archaeological monument with an effective transfer of results into social practice. This, in turn, helps to awake awareness, at both national and broader level, of the importance of archaeological studies and the protection of such valuable monuments. In addition to the current activities, the ambition of the working team and the village representatives is to create an educational walkway connecting all five archaeological sites located in the Bojná agglomeration. Each year, the village organises the St. Cyril and Methodius Day at the Valy hillfort, which serves as a perfect opportunity for popularising the results of our joint work (Fig. 8). Future plans include opening an archaeological open-air museum located in the vicinity of the historical sites.

Conclusion

The Great Moravian period belongs to the scientific priorities set by the Institute of Archaeology of the Slovak Academy of Sciences in Nitra. Apart from the sites described above, we focus on other significant monuments dated to that period, including the main hillfort in North-Western Slovakia – Divinka near Žilina – and a newly discovered agglomeration of fortifications near Dolné Vestenice in the Upper Nitra valley. The Institute supports attempts to disseminate reliable information about history and our early medieval monuments, including presentations of architectural details in their original environment, and believes that popularisation is not only a valuable and effective method of communicating with the community but that it duly complements our scientific work as well.

References

Abbreviations

AÚ AV ČR, Brno, v.v.i. = Archeologický ústav Akademie věd České republiky, Brno
 AÚ SAV Nitra = Archeologický ústav Slovenskej Akadémie Vied, Nitra
 SNM Bratislava = Slovenské národné muzeum, Bratislava

Literature

- Baxa P., Ferus V., Glaser-Opitzová R. and Katkinová J. 2004. Veľkomoravský kostol v Kopčanoch. *Pamiatky a múzeá* 4, 65.
- Bednár P. and Ruttkay M. 2018. Nitra and the Principality of Nitra after the Fall of Great Moravia. In P. Kouřil and R. Procházka *et al.* (eds.), *Moravian and Silesian Strongholds of the Tenth and Eleventh Centuries in the Context of Central Europe* (= *Spisy Archeologického ústavu AV ČR Brno* 57). Brno: AÚ AV ČR, Brno, v.v.i., 229–244.
- Beljak J., Mácelová M. and Ruttkay M. 2018. Hradisko vo Zvolene – Môtovej vo svetle najnovších výskumov. In N. Beljak-Pažinová and Z. Borzová (eds.), *Stredné Slovensko v stredoveku. Vývoj osídlenia regiónu pred udelením mestských privilégií mestu Zvolen*. Zvolen: Mesto Zvolen, 124–157.
- Fusek G. 2017. Kleiner Hortfund von Divinka. In G. Fusek (ed.), *Archäologische Studien zum frühen Mittelalter* (= *Archaeologica Slovaca Monographiae Communicationes* 19). Nitra: AÚ SAV Nitra, 33–43.
- Henning J. and Ruttkay M. 2011. Frühmittelalterliche Burgwälle an der mittleren Donau im ostmitteleuropäischen Kontext: Ein deutsch-slowakisches Forschungsprojekt. In J. Macháček and Š. Ungermann (eds.), *Frühgeschichtliche Zentralorte in Mitteleuropa* (= *Studien zur Archäologie Europas* 14). Bonn: Habelt, 259–288.
- Henning J., Ruttkay M., Pieta K. and Heussner K.-U. 2017. Bojná a datovanie hradísk Nitrianskeho kniežatstva. Prínos prírodovedných metód k archeologickému výskumu. In K. Pieta and Z. Robak (eds.), *Bojná 2. Nové výsledky výskumov časnostredovekých hradísk* (= *Archaeologica Slovaca Monographiae Fontes* 22). Nitra: AÚ SAV Nitra, 335–345.
- Pieta K. and Robak Z. 2017a. The Early Medieval Hillfort Bojná-Valy, Slovakia, and its Defence System. *Acta Archaeologica Carpathica* 52, 329–351.
- Pieta K. and Robak Z. (eds.) 2017b. *Bojná 2. Nové výsledky výskumov časnostredovekých hradísk* (= *Archaeologica Slovaca Monographiae Fontes* 22). Nitra: AÚ SAV Nitra.
- Pieta K. and Robak Z. [in print] Výskum časnostredovekej aglomerácie Bojná v roku 2014. *Archeologické výskumy a nálezy na Slovensku v roku 2014*.
- Ruttkay M. 2012. Mocenské centrá Nitrianskeho kniežatstva. In B. Panis, M. Ruttkay, and V. Turčan (eds.), *Bratia, ktorí menili svet – Konštantín a Metod*. Bratislava: SNM Bratislava/AÚ SAV Nitra, 115–144.
- Ruttkay M. 2015. Moderná dokumentácia archeologických situácií a nálezov v Archeologickom ústave SAV. *Študijné Zvesti Archeologického Ústavu SAV* 58, 5–58.
- Ruttkay M. 2017. Strongholds – Routes – Frontiers – LIDAR. In G. Fusek (ed.), *Archäologische Studien zum frühen Mittelalter* (= *Archaeologica Slovaca Monographiae Communicationes* 19). Nitra: AÚ SAV Nitra, 161–174.