

Katalin Tolnai

A ROYAL CENTRE IN ELEVENTH-CENTURY VISEGRÁD

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Katalin Tolnai

(Hungary)

Thesis submitted to the Department of Medieval Studies,
Central European University, Budapest, in partial fulfillment of the requirements
of the Master of Arts degree in Medieval Studies
Accepted in conformance with the standards of the CEU

Chair, Examination Committee

Thesis Supervisor

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I, the undersigned, **Katalin Tolnai**, candidate for the MA degree in Medieval Studies declare herewith that the present thesis is exclusively my own work, based on my research and only such external information as properly credited in notes and bibliography. I declare that no unidentified and illegitimate use was made of the work of others, and no part of the thesis infringes on any person's or institution's copyright. I also declare that no part of the thesis has been submitted in this form to any other institution of higher education for an academic degree.

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ABSTRACT

The existence of Visegrád county in the early Arpadian period is demonstrated by one of the earliest charter of St Stephan, the founder of the Hungarian Kingdom. Scholars located the centre of the county on the ruins of the Roman *Pone Navata*, a fortification at Visegrád, Sibrik hill. The thesis presents the extent of re-use of the Roman fortification in the early Arpadian period as well as its architectural and functional elements. As a result of the stratigraphic and spatial analyses of the features a two-phased reconstruction of an existing tower and construction of stone buildings are confirmed. The thesis argues that the two periods represent a functional change in the castle; a transformation from an administrative and defensive unit to a residential site, and illustrate a continuous rehabilitation of the castle area in the early Arpadian period. Regarding the extent of the re-use the thesis argues that the Roman structures remained in good condition, and except a few restoration works, they could have been used in their original function.

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TABLE OF CONTENTS

INTRODUCTION	1
I. TOPOGRAPHY AND RESEARCH HISTORY	3
I.1. THE RESEARCH AREA	3
I.2. THE RESEARCH PERIOD	4
I.3. RESEARCH HISTORY	8
I.3.1. <i>Archaeological research</i>	8
I.3.2. <i>Documentation and methodological issues</i>	12
I.3.3. <i>Archaeological and geographical information system of the site</i>	14
II. STRATIGRAPHY AND CHRONOLOGY	16
II.1. THE ROMAN PERIOD	16
II.1.1. <i>Pone Navata</i>	16
II.1.2. <i>Characteristic finds from the Roman period</i>	22
II.1.3. <i>'Barbarian' times and the Avars</i>	25
II.2. THE ARPADIAN PERIOD	27
II.2.1. <i>Re-building and transformation of the Roman fortification system</i>	27
II.2.2. <i>Transformation of the inner area of the Roman fortification</i>	32
II.2.3. <i>Characteristic finds from the Arpadian-age</i>	35
III. RE-USE OF ROMAN FORTIFIED SITES IN THE ARPADIAN-AGE.....	39
IV. A ROYAL CENTRE AT VISEGRÁD AND THE KINGDOM OF THE EARLY ARPADIANS.....	46
CONCLUSION	52
BIBLIOGRAPHY	54
APPENDIX.....	61

INTRODUCTION

*'The research of the castles of the Arpad-monarchy must be placed onto a new basis, it must be start from scratch again. Furthermore it should be done by those who can use both the charters and the spade, those who are archaeologists.'*¹

In the research of the Arpadian-age royal centers of the Hungarian Kingdom István Bóna's above quoted work is still can be seen as a fundamental basis. In his book Bóna have summarized and evaluated the historical and archaeological literature available on the castles and presented several problems still to be analyzed. Furthermore he also listed the role of the castles and centers in the early Hungarian history.

As a result of the research of the early Hungarian castles² a numerous early centre was excavated, however, a great number of the material is still unpublished, and in several cases not more than the excavation report is available.

In my thesis I will present and analyze the sources available on an Arpadian age castle situated in Visegrád. In the following chapters I will interpret the archaeological material and the methods of documentation as it is available at present, in order to give an architectural and functional analysis of the castle-area. As the typology of the artifacts and the stratigraphical sequence of all the features cannot be presented here, the aim of my research is to give an overview of the material currently available. A total, monographic study of the site cannot be the topic of this thesis, as it would also require the presentation and analysis of the Roman features. Therefore, the

¹ Bóna István, *Az Árpádok korai várai* (Early castles of the Arpadians) (Debrecen: Ethnica, 1998), 15. "Az Árpád-monarchia korai várainak kutatását új alapokra kell helyezni, előlről kell kezdeni. Mégpedig azoknak, akik egyaránt jól forgatják az oklevelet és az ásót, vagyis a régészeknek."

² On the research history of early centres see: Wolf Mária, "Earthen forts," in *Hungarian Archaeology at the Turn of the Millenium*, ed-in-chief Zsolt Visy (Budapest: Teleki László Foundation, 2003), 328-332. Most recent summary of the topic is Maxim Mordovin, "A vártartomány szervezet kialakulása a kelet-közép-európai államokon" [The formation of the county system in Eastern and Central European states.] PhD dissertation University Eötvös Loránd 2010.

main focus of this work is the interpretation of the medieval features from different point of views.

The settlement of Visegrád played significant role in the history of the Hungarian Kingdom. Beside its early Arpadian history, the settlement became one of the most significant royal centres in the Middle Ages. Furthermore it is one of the most important site of the Hungarian medieval archaeology. A systematic analysis of former excavations on the Arpadian remains of Visegrád could give new perspectives both in the historical and in archaeological research.³

As the topic of my thesis is the archaeological analysis of a 10-11th century centre rebuilt on a Roman remains the following research questions should be discussed: the extent and methods of the re-use in the Arpadian period, to determine the architectural and functional elements of the features, and to determine the range of the re-use compared to other sites.

³ On medieval history and archaeology of Visegrád see: Buzás Gergely, Laszlovszky József and Magyar Károly, "Medieval royal centres," in *Hungarian Archaeology at the Turn of the Millenium*, ed-in-chief Zsolt Visy (Budapest: Teleki László Foundation, 2003), 348-363.; Laszlovszky József ed. *Medieval Visegrád. Royal castle, palace and Fransiscan friary*, Diss.Pann III. 4. (Budapest: ELTE, 1995)

I. TOPOGRAPHY AND RESEARCH HISTORY

I.1. The research area

The Visegrad mountain, being a part of the North Hungarian Mountains, is located in the Danube Bend separated from the Pilis Mountain by the Dera- and the Szentlélek stream. (Fig.1/1.-3.) The mountain is built of andesite, a volcanic rock, which became popular raw material in the area. (Fig.1/4.) The area, bearing the name Visegrád, played an important role in the medieval history of Hungary as a part of the Medium Regni⁴. The site is situated in the middle of the triangle of the most significant Medieval sites, Esztergom – Székesfehérvár – Buda, where, along the Danube, royal mansions, hunting seats and ecclesiastical centres were established.

The existence of eleventh-century Visegrád is demonstrated by one of the earliest donation charters of the Hungarian Kingdom given by St. Stephan to the Bishopric of Veszprém in 1009.⁵ The charter mentions the castle (*civitas*) of Visegrad and the surrounding county controlled by the *comes*, (bailiff), the royal representative of the area, and puts it under the authority of the bishopric.⁶

The eldest maps now available of the site use the term Visegrad, for all the area. The Military surveys, conducted by the Austro-Hungarian Monarchy present the area as mountainous woodland. (Fig.2/1-3.) Beside these, eighteenth century cadastral maps can be found in the National Archives of Hungary depicting Visegrád. Karpe's map depicts a road leading from the Danube bank towards the lower castle, as well as

⁴ Kumorovitz L. Bernát, "Buda (és Pest) fővárossá alakulásának kezdetei - Die Anfänge des Hauptstadtwerdens von Buda (und Pest)," *Tanulmányok Budapest Múltjából* 18 (1971): 7-57.

⁵ "Stephanus I rex Hungariae episcopatum Vesprimiensem dotat et territorium dioecesis constituit," in *Diplomata Hungariae Antiquissima I*, ed. Georgius Györffy, (Budapest: In Aedibus Academiae Scientiarum Hungaricae, 1992), 49-53.

⁶ Szőke Mátyás, "The Medieval Castle of Visegrad" *In Europe's centre around AD 1000*, ed. Alfried Wieczorek and Hans-Martin Hinz, (Stuttgart: Theiss, 2000), 383-384.

a small stream, the Matthias stream.⁷ (Fig.3). Balla's map, dated to 1777, illustrates Matthias stream, besides the road and also the cadastral system of the area.⁸ (Fig.4) From 1821, map of Asboth gives us more precise information: it illustrates a road, leading from the Danube bend to the castle of Visegrád, the so-called Via Antiqua as well an almost triangular shaped area, a hill, labeling it as 'Sibrik.'⁹ (Fig.5)

Nor the meaning neither the first occurrence of the term 'Sibrik' is known in the history of Visegrad. Almost the similar term 'Sibri' was used by Liugi Ferdinando Marsigli depicting the 1686 – year siege of Buda Castle labeling a wooden, bushy place implying that is could be used as a geographical name.¹⁰ (Fig.6/1.) As a conclusion, it is feasible that the term 'Sibrik' was used from the seventeenth century onwards, however currently, the first known occurrence from Visegrad is dated to 1821.

I.2. The research period

As a part of the Medium Regni, Visegrád played important role along the Middle Ages. My thesis, however, deals rather with the first half of Arpadian period based on the material which implies that after the Tatar Invasion the Sibrik-hill

⁷ National Archives of Hungary. S 11 No 0207. *Visegrad dominii*. [Michael Karpe – Regio Cameralis ordinarius]. n.d.

⁸ National Archives of Hungary. S12 DIV XIV No41. *Delienatio angustias viarum ad ripam Danubii, circa coronale opidum Visegrad, ac reparationis ideam sistens*. [Antal Balla]. 1777.

⁹ National Archives of Hungary. S12 DIV XIII No496. *Situationis Planum neo erectae Viae ... Wysegrad* [Michael Asboth – Jur. Geom.]. 1821.

¹⁰ Dr. Veress Endre, "Gróf Marsigli Alajos Ferdinánd olasz had mérnök jelentése és térképei Budavár 1684-1686-iki ostromairól, visszafoglalásáról és helyszínrajzáról" (Reports and maps on the 1648-686 year siege of Buda castle, by Count A.F Marsigli, Italian soldier), *Budapest Régiségei* 9 (1906): 103-170. p44. The term occurs only in the numbered list with Italian translation.

become desolated again in contrast to the eleventh century when a considerable re-habitation can be traced.¹¹

Before evaluating the status and the rank of the early medieval Visegrád, a brief history of the birth of the Hungarian Kingdom should be presented. The aim of this short summary is not to offer a compressed history of the eleventh century, but to highlight those events which are related, directly or indirectly, to the history of Visegrád.

Around 970 prince Géza, the great-grandson of Árpád, and duke of the Hungarians turned to the Holy Roman Empire with political ambitions. As a result the Emperor sent a mission to the Hungarian people in order to spread the Christian faith among them. Géza had himself baptized as well as his son, Vajk / Stephen. The first wholehearted Christian king was him, Stephen I. ruled from 997. In order to confirm his power, Stephen I became the first crowned king of the Hungarians.

Stephen I was the king with whom the foundation and development of the Christian Hungarian Kingdom begun. In the eleventh century, the new kingdom was systematically established on both administrative and ecclesiastic units. The Arpads, the ruling dynasty, was followed by several leading families, kindreds, whose leaders bore the title: ispán, (comes). They were not only the leading office-holders, royal representatives, but also chiefs of a county or a castle. The royal authority rested upon the newly erected or renovated castles the most prominent of which were Esztergom, Székesfehérvár and Veszprém, the royal centres of the king and the queen. According to the written sources and the archaeological material Visegrád also took a notable

¹¹ On later history of Visegrád see: Iván László, *A visegrádi vár története a kezdetektől 1685-ig* (Visegrád: Magyar Nemzeti Múzeum Mátyás Király Múzeuma, 2004); Buzás Gergely, *A visegrádi fellegrvár*. (Visegrád: Magyar Nemzeti Múzeum Mátyás Király Múzeuma, 2006).

part in the process of the state formation being one of the eldest administrative and ecclesiastical centre of the kingdom.

As his son died in a hunting accident Stephan I had to nominate his successor. In order to protect the Christian Kingdom, Stephen I. ordered to blind his cousin Vasul, the pagan whose three sons /Béla, Andrew and Levente/ fled to Poland. Later on, by the time of the reign of Béla I (1060-1063), his brother Andrew died and his adherents took Andrew's son Solomon to Germany to his father-in-law, Emperor Henry IV. In 1063 Emperor Henry helped his brother in law Solomon to attack on Béla, who died accidentally in the evening of the battle. Béla's three sons (Géza, Ladislaus and Lampert) fled to Poland, and Solomon became the ruling king. In 1074 March 14 however the three sons of Béla I attacked and defeated Solomon at Mogyoród. The new king became Géza (1074-1077), the eldest, after whose death his brother Ladislaus I (1077-1095) became the ruling king. The contests for the ruling power had an impact on the castle of Visegrád as well. As it is known from the 'Annales Posoniensis' during the first years of his reign, Ladislaus I had several affairs with Solomon, whom at last Ladislaus I. kept in prison in Visegrad.¹² In the year of canonization of Stephen I, in 1083, Solomon was set free from Visegrad and fled to the Pechenegs, to the Lower Danube.¹³ (Fig.6/2.)

From that time onwards the sources keep silence about the early Visegrád. We can only presume that the Mongol Invasion had a serious impact on the life of the area. Though as unequivocal data as a written source is not available presenting the abandonment of the site the two newly erected castles, as a part defense system along

¹² "Rex autem Ladizlaous deprehenso flagitio cepit Salomonem et in Vyssegrad retrusit in cacerem" in *Scriptores Rerum Hungaricarum I-II*, ed.: Emeritus Szentpétery, (Budapest: Magyar Tudományos Akadémia, 1937-1938) 407.

the Danube, can pretend an indirect evidence for that. A few decades later in 1251 Mary, the wife of the king, Béla IV donated a charter,¹⁴ and from the year 1255 building a new castle was begun. From that time onwards the term ‘castle of Visegrad’ was used for the newly built upper and lower castle, while the eleventh century castle remained invisible in the sources. (Fig.8/1-2.)

The process of the state formation of the Hungarian Kingdom can be further analyzed based on the geographical territories, the so-called counties belonging to the castles. According to the donation charter (1009) the early castle therefore the county was named as ‘*Vyssegrad*.’ The expression ‘*Vise hrad*’ had a Slavic origin, meaning ‘high castle’ or ‘castle on a hill.’¹⁵ It is clear that the name of the place was given by Slavic local population however it should be identified whether the name of the settlement were given by the inhabitants themselves.¹⁶ It is feasible, that the name was not given by the people living in Visegrád, but rather the Slavic population of the surrounding area named the place in their own language. The using of the term ‘*hrad*’ in the meaning of a ‘ruined place’ suggests that the building in question, on the top of a hill, was strong enough and was in good condition enough to consider as a *castle*. The term ‘Visegrad’ rested upon during the following centuries in contrast to the memory of the location of the early centre, which rested hidden along almost a thousand year.

¹³ Engel Pál, *The Realm of St Stephen. A History of Medieval Hungary, 895-1526* (London: I.B. Tauris Publishers, 2001) 25-37.

¹⁴ “Carissima consors nostra, domina Maria regina Hungariae quendam desertum montem, in silva Pelys existentem, pro castro construendo ad defensionem viduarum et orphanorum a nobis instanter petiit sibi dari contra hostilitatem Tartaricam, que cotidie formidabilis imminebat...” in Wenczel Gusztáv, *Árpádkori új okmánytár* (Arpadian-age charters) Monumenta Hungariae Historica, vol. VII (XII.)-XII-(XXII) (Pest: 1869-1874)

¹⁵ Kiss Lajos, *Földrajzi nevek etimológiai szótára* (Etymological dictionary of geographical names) (Budapest: Akadémiai Kiadó, 1980), 697.

¹⁶ Szőke Mátyás, “The Medieval Castle of Visegrad” *In Europe’s centre around AD 1000*, ed. Alfried Wiczorek and Hans-Martin Hinz, (Stuttgart: Theiss, 2000), 383-384.

I.3. Research history

I.3.1. Archaeological research

Besides written sources and historical maps, archaeological research can help in the identification of the early castle. It was Flóris Rómer¹⁷, who first drew the attention to the ruins covered with earth at Sibrik hill. (Fig. 9/1.) Later on, János Schulek, who was the main archaeologist of Visegrád before the World War II, was aimed to conduct excavation at the area, but he didn't get the permission from the owners. In 1941 however 52 pieces of coin were collected from the site.¹⁸ The investigation of the area was then connected to the research of the Limes along the Danube. The first excavations on the Sibrik hill were conducted in 1951 and 1952 by Sándor Soproni. In 1951-52 18 trenches were opened. The aim of the research was to analyze the structure of the Roman fortification. During the excavation, however, a great number of artifacts from the eleventh - twelfth century were also found. The western wall, and the place of the SW and NW towers were identified in these years. As a result, not only the main structure of the Roman fortification, but also its reuse in the Middle Ages was recognized. Although these important discoveries related to the Roman period were briefly published in 1954 the other remains of the castle are remained unknown for the next 20 years. (Fig.9/2.)

Between 1970 and 1977 several trenches were opened in order to excavate the Roman walls and discover their changes in the Middle Ages. The excavations were

¹⁷ Rómer Flóris, *Reports*, Library of the National Office of Cultural Heritage, 19414 KK, XIII, 126. Flóris Rómer (1815-1889) the 'Father' of Hungarian archaeology, a founder of the Archaeological committee of the Hungarian Academy of Science, and the editor of *Archeologiai Értesítő* (Archaeological report) one of the leading Journals of archaeology in Hungary. Vékony Gábor, "The History of Archaeological Fieldwork in Hungary," in *Hungarian Archaeology at the Turn of the Millenium*, ed. Zsolt Visy(Budapest: Teleki László Foundation, 2003) 17-19.

¹⁸ Soproni Sándor, "A visegrádi római tábor és középkori vár" (The Roman fortification and the Medieval Castle at Visegrád) *Arch Ért* 81 (1954) 49. Detailed descriptions of these coins are not available at the present.

held in two periods, first in 1970-71 and then 1974-77. In the year 1970 a rescue excavation was held in the area. The aim of the research was to protect the western side of the fortification where the entrance gate was supposed. Though the entrance was not found a square shaped tower came to light in these years. In the second excavation period the southeastern part of the fortification was unearthed. Furthermore a part of the inner area of the fortification was also researched. The last rescue excavation was held in 1985, when a new building in the inner area of the fortification was found. From that time onwards no other excavations were conducted on the hill however at the surrounding area some other research was also held.¹⁹ In 2009 a memorial was erected on the hill, the foundation of which was excavated. (Fig.10/1.;11/2)

On the hill nearby other remains were also unearthed. Besides the fortification (Fig.10/2./1) a two-phased church with its cemetery (Fig.10/2./2), a settlement with a parish church and its cemetery (Fig.10/2./3) and ruins of a monastery (Fig.10/2./4) came to light.

The two-phased church (Fig.10/2./2), consisting of a supposedly a parish and, later, an archidiaconal church located on southeastern direction of the castle. Here, the excavations begun in the 50's when Sándor Soproni found a complex building structure and determined it as a Roman villa. Later on, in 1970's the excavations were conducted by Mátyás Szőke. The results of the researches are mostly unpublished, short reports were published by Mátyás Szőke and Gergely Buzás. A thorough

¹⁹ Soproni Sándor, "Ásatási napló 1951-1952" [Unpublished excavation reports 1951-1952], Collection of the King Matthias Museum, Visegrád.; Szőke Mátyás, "Ásatási napló 1970-71, 1974-75, 1976-77, 1985" [Unpublished excavation reports 1970-71, 1974-75, 1976-77, 1985], Collection of the King Matthias Museum, Visegrád.

analysis of the unearthed features and the artifacts was made by Judit Kodolányi as an MA thesis.²⁰

As a result of the investigations the architectural and chronological elements of the two churches were presented. Previously a small parish church with semicircular chancel was built which was later totally demolished. The overall size of this building is around 10x4.4 m. The walls were made with the so-called opus spiccatum technique, using irregular shaped stones plastered with clay.

After a while the small church was completely demolished, only the bases of the foundation rested. At the same place a new church (18.35*9.4 m) was erected, with rectangular chancel. At a certain time the second church was also altered. A small tower was attached to it with stairs leading to the newly erected storey. In the same time a new building was attached to the nave's southern part. Graves, belonged to the churches were also come to light. The 2nd church had a peculiar decoration. From outside, it was covered with pure white color plaster. The inside walls, however, were richly decorated with wall paintings, frescoes made with al secco technique. The walls were decorated with geometric ornaments as well as with depictions of humans and animals with a style that shows eastern connections. In the church, fragments of highly decorated carved cushion capitals and richly decorated stone carvings were found. The analysis of the stone material was made by Andrea Szebeni, who, in her master thesis, reconstructed the structure of the western gallery.²¹ The decoration of fragmented cushion capitals is similar in style with those fragments found in the St. Andrew monastery. The stylistic similarities are in a strong connection with each other therefore it is feasible that both of them were made by the

²⁰ I would like to thank Judit that I could use her MA Thesis for my research. Kodolányi, Judit, "A visegrádi esperesi templom" (Archidiaconal church at Visegrad)., MA Thesis, Budapest: ELTE Department of Archaeology, 2010)

same stonecutter or at least at the same workshop. The function of the second church is still a debated question however; most commonly it is determined as an archidiaconal church, which is the centre of the ecclesiastical unit belonging to the county seat.²² According to a recent study it is supposed that the formation of the church to a more representative style sing other functional determination. The high quality architectural elements can refer to a patron of higher social status, i.e. a royal representative.²³

In the valley of Várkert, dwellings of a rural settlement were unearthed (Fig.10/2./3). At least 34 sunken houses were dug up, furthermore a parish church and another cemetery were also found.²⁴ The parish church of Várkert is quite small in size, built with 9.5 m long trapezoid nave and semicircular sanctuary. Around the parish church laid the cemetery of the settlement. 463 burials were unearthed here with coins, dated from the early 12th century.²⁵

The size of the semi-sunken houses excavated at the settlement was 2.5/3*2.8-4 m, and they were 80-410 cm deepened into the earth. The entrances to the houses were placed usually on the southern or eastern side with stairs.

²¹ Szebeni Andrea, "A visegrádi esperesi templom" (Archidiaconal church at Visegrad), MA Thesis, (Budapest: ELTE Department of Art History, 2001)

²² Zsoldos Attila, "Visegrád vármegye és utódai" (The county of Visegrád and what came after it) *Történelmi szemle* 40/1-2 (1998) 3-17

²³ Mordovin Maxim, "A vártartomány szervezet kialakulása..." 112.

²⁴ Buzás Gergely, "Visegrád," in *Medium Regni. Medieval Hungarian Royal Seats*, ed. Julianna Altmann, Piroska Biczó, Gergely Buzás, István Horváth, Annamária Kovács, Gyula Siklósi and András Végh (Budapest: Nap Kiadó, 1999), 115-162.

²⁵ Kovalovszki Júlia, "Ásatások a Várkertben" (Excavations at Várkert) *Műemlékvédelem* 39/2 (1995) 69-74. The material of the cemetery and the parish church is unfortunately still partly published. The only available map of the excavations although shows the structure of the building, but the cemetery and most of the houses of the settlements is waiting for further research. For the map see: Kovalovszki Júlia, "A Visegrád-várkeri Árpád-kori faluásatásról" (On the excavation of the village at Visegrád-Várkert) in *A magyar falu régésze Méri István 1911-1976* (The archaeologist of Hungarian villages Méri István 1911-1976) (Cegléd: Kossuth Museum, 1986), 61-63, map in the appendix. On anthropological analyses of the skulls see Katherine Kondor, "Diet and Social Stratification in Árpád-Period Hungary" *Annual of Medieval Studies at CEU* 13(2007): 51-73.

The roof was held by posts, and all of the houses were equipped with stone ovens. Furthermore an oven for bronze melting was also unearthed. It is supposed that the settlement was aimed to serve the castle.

The importance of the area is also shown by the foundation of a royal monastery (Fig.10/2./4). The St Andrew monastery was founded around 1047-1060 by Andrew I. The monastery was used by Greek monks or those monks who followed a Greco-Byzantine ritual. The plan and the ornamentation of the monastery implicate a strong connection with other contemporary Hungarian and North-Adriatic building structures. After the thirteenth century, the monastery was conveyed to the Benedictines. The monastery was continuously used until 1544 from the eleventh century. therefore the artifacts can be compared to those excavated at the Sibrik-hill. Furthermore, a strong connection can be recorded with the archidiaconal church, where carvings from the monastery came to light.²⁶

I.3.2. Documentation and methodological issues

The archaeological data relevant for the history of the castle can be divided into two main types: the written documentation of the excavations and the archaeological finds. Observations made during the excavations were recorded in the excavation diary. Photos were taken of the features and plans of sections were drawn in order to demonstrate the spatial connections of the features. Besides the documentation the artifacts themselves provide the basis for the absolute chronological analysis. The excavated material of the Sibrik-hill consists of more than 3300 pieces of catalogued pieces, 80% of which are pottery fragments. Furthermore,

²⁶ Buzás Gergely and Eszes Bernadett, "XI századi görög monostor Visegrádon" (The Greek monastery of Visegrád, in the 11th century) *Architectura reigioasă medievală IV- Medieval Ecclesiastical Architecture in Transylvania - IV.*, ed. Péter Levente Szöcs and Adrian Andrei Rusu (Satu Mare: Editura Muzeului Sătmăreau, 2007) 49-94.

iron tools, bonetools, coins were also found in the trenches. During the excavation mortar analysis of the walls was made in order to help the chronological ordering of the structures. The animal bone finds can also help in understanding the site some of which were examined by Sándor Bökönyi.²⁷

According to the traditional archeological methodology the excavations at Sibrik hill were led in a layer-by-layer order. In every trench the sequential layers were recorded, as well as the features came to light in them. In some trenches the archaeologists deepened in the soil spit by spit that is they deepened as thick layer as a spit is. After finding a surface where the features were identified, they unearthed the features layer by layer in order to record chronological and stratigraphical context of the objects. Site plans and cross sections were made in order to record the unearthed features. The excavation diary was recorded in a day-by-day, trench-by-trench order. Photos were taken of the different features and the artifacts were also catalogued according to their layer and feature.

Beside the documentation of the excavation several types of topographical data is also available of the site. In 1975 aerial photos were taken from hot air balloon.²⁸ (Fig.12/1.) In addition stereophotos of the trenches were also taken by the archaeologist in 1976 (Fig.12/2.) With the help of these photos, taken from a long bar holding above the trenches Mátyás Szőke was able to make an orthophoto, a geometrically corrected aerial photo of the excavated trenches. (Fig.12/3.) Although the quality of the documentation cannot be compared those records, compiled nowadays, which are made using total stations and GPS for positioning and site forms and protocols for descriptions; but even, it is exceptional in the Hungarian

²⁷ Bökönyi Sándor, *History of Domestic Mammals in Central and Eastern Europe* (Budapest: Akadémiai Kiadó, 1974) 430.

²⁸ Erdélyi Balázs, "Régészeti légi fényképezés és légifénykép-értelmezés," (Taking and interpreting archeological aerial photographs) *HOMÉ* 21 (1982) 81-88.

archaeology of the seventies. Therefore it is possible to evaluate the documentation using up-to-date technologies as well. The versatile method of photo documentation is also unique in the Hungarian archaeological tradition, giving us extraordinary possibilities in modeling the excavations.

Geophysical surveys were also conducted at the site, first in 1985, then in 2010. The aim of the first geophysical survey was to identify stone buildings or a church inside the castle area. During the survey 860 point were measured, in two different level, at the depth of 0,5-1m. As a result of this survey it can be suggested, that in the southwestern corner of the castle area two approximately 10x10 m large building are lying under the surface.²⁹ In 1985 the area around the square shaped tower was intentionally not researched with geophysical survey. In 2010 however a new survey was carried out in the framework of a co-operation between Professor Falko Daim and István Feld. The measurements were carried out by a team led by Dr. Siri Seren. At this time the inner part of the castle area was measured again with magnetometer as well as with georadar. As a result, georadar showed a yet unknown building near the square shaped tower, while the geomagnetic measurements also indicated the buildings in the south western corner. Comparing the result these surveys it can be argued that all the buildings were built along the wall of the castle rather than in the inner area. (Fig. 11/2.)

I.3.3. Archaeological and geographical information system of the site

As a result of the research from the past 60 years several types of data is available for further analysis. In a former master thesis I have already analyzed a

²⁹ Pattanytus-Á. Miklós, “Jelentés a visegrádi Sibrik dombon végzett régészeti célú geoelektromos mérésekről” [Unpublished report on the geophysical survey of Visegrád – Sibrik hill, 1985] (Budapest: Magyar Állami Eötvös Loránd Geofizikai Intézet, 1985) Collection of the King Matthias Museum, Visegrád

smaller part of the site, the material from the excavations held in 1970-1971.³⁰ At the first encounter with the material I have already recognized that the results of the different approaches need to be coherently processed. Therefore I have prepared a database in order to create a coherent and systematic basis for the different types of data.³¹ Furthermore as accurate topographical measurements were also taken during the excavations, compilation of a complex site plan, presenting all the relevant materials seemed to be executable. As the different plans and surveys were made in a local geographical system I needed to determine their exact locations in the standard Hungarian geographical system. Therefore I led a topographical survey on the hill in 2007 in order to determine the geographical basis of the complex database.³² (Fig.13/1.) Cadastral and topographical maps at a scale 1:10000 are also available of the site as well as an orthophoto with the help of which I have managed to create a detailed 3-D elevation model of the hill. (Fig.13/2.) The model properly illustrates the terrains of the hill as well as the trace of a former stream, with 'Y' shaped form. In order to get vector graphics of the features I have scanned all the plans and drawings of the excavation documentation and then digitized them using ArcGIS softver. While the excavation diary was recorded day by day, detailed descriptions and attributes of the features should have been put together from bits and pieces. As a result a geographically corrected, systematic database of the features including a 3D model is now available for further research.

³⁰ Tolnai Katalin, "Visegrád kora Árpád-kori emlékei" (Early Arpadian Remains of Visegrád) MA Thesis (Budapest: ELTE Department of Archaeology, 2007)

³¹ Tolnai Katalin, "Régészeti feltárás térinformatikai támogatása" (GIS supported archaeological analysis) *Geodesy and Cartography* 2009/02 (61) 23-27.

³² Tolnai Katalin, "Régészeti feltárás térinformatikai támogatása" (GIS supported archaeological analysis) BSc Thesis (Székesfehérvár: WHU Faculty of Geoinformatics, 2008)

II. STRATIGRAPHY AND CHRONOLOGY

In this chapter I will briefly present the archaeological features and their positions. The stratigraphic positions of the features let us determine the relative chronological sequences of the site.³³ According to the historical sources and the unearthed material the ruins on the Sibrik hill stemmed mainly from two historical periods from the late Roman time and from the time of the Hungarian State formation. I will not give a detailed description of all the features, only those which are significantly presents the functional and architectural context of the site. Therefore the Roman material will only be presented briefly, emphasizing those features that are definitely stemmed from that period. Furthermore among the artifacts, those will be presented that represent the chronological sequence of the remains.

In case of the Arpadian period the aim was to determine the function of the castle as well as those features that would suggest a proper reconstruction of it. It should be noted however that along the first phase of the analysis the archaeological features should be analyzed in order to determine the relative chronology of the features. As a further step the historical sources should associate with the building periods. (Fig.14)

II.1. The Roman period

II.1.1. Pone Navata

According to the historical sources the Roman fortification, as a part of the Limes along the Danube, was built around 325-330. The imperial document, *Notitia*

³³ Description of the stratigraphical sequences is added to the appendix trench by trench.

Dignitatum, describing the administrative units of the Roman Empire, identifies the fortification as the auxiliary camp of *Pone Navata*.³⁴

The basis of the fortification is the Roman wall structure supplemented with U- and fan-shaped towers that encloses a 130x140 m area. The ruins of the wall came to light 10-15 cm beneath the topsoil. Depending on their position on the hill the walls of the superstructure remained at some parts even 150-190 cm high.

The slightly irregular, triangular ground-plan of the castle corresponds with the shape of the plateau of the hill. The wall is 110 -140 cm thick, with a 20/30 cm thick footing on the inner side and app. 50 cm footing on the outer side. The total width of the foundation is around 190 cm. The first therefore the undermost row of the foundation was built from irregular shaped stones, without mortar. The wall of the superstructure consists of two part: on the outers sides huge ashlar cover the part which was built of irregular stones lied into white mortar. The stone rows follow the slope of the ground.³⁵ On the northern side, the exact orientation of the wall is not known, however on the southern side the course of the foundation has a particular form, it was not straight, but curved built from shorter fragments fixed together with mortar under an obtuse angel. This kind of walling technique, which is called '*Murus Sinuosus et Cornutus*', is known from a description of Ammianus Marcellinus.³⁶ It

³⁴ "Auxilia Ursarensia pone Navata nunc ad Statuas" Borhy László, *Notitia utraque cum Orientis tum Occidentis ultra Arcadii Honorique Caesarum tempora* (Budapest: Pythae, 2003.), CXI, facsimile: 144.

The *Notitia Dignitatum*, compiled under the rule Emperor Arcadius (395-408) and Emperor Honorius (395-423), lists the administrative and military units of the Roman Empire.

³⁵ Soproni Sándor, "A visegrádi római tábor és középkori vár" (The Roman fortification and the Medieval Castle at Visegrád) *Arch Ért* 81 (1954): 49-53.

³⁶ VII. 17. "Latius se proinde iactans additaeque spe quicquid adgredi posset adipiscendi, interceptis castellis aliis vilioribus Virtam adoriri disposuit, munimentum valde vetustum, ut aedificatum a Macedone credatur Alexandro, in extremo quidem Mesopotamiae situm, sed muris velut sinuosis circumdatum et cornutis instructioneque varia inaccessum."

Ammianus Marcellinus, *Res Gestae a Fine Corneli Taciti*.
<http://www.thelatinlibrary.com/ammianus/20.shtml#7> (last accessed 2011-05-17)

VII. 17. "Then, being full of exultation, and cherishing greater hopes than ever of gaining whatever he desired, after taking a few forts of small importance, he prepared to attack Victa, a very ancient

should be noted however that the walls of the superstructure were built up straight. Furthermore, on the Western side of the fortification the foundation draws a larger arc, following the form of the hill. (Fig. 11/1.) During the construction of the wall presumably a timber frame was used as a scaffold. The location of the frame can be traced at the northeastern corner of the fortification, on the inner side of the wall, where three rounded holes, with 8 cm diameter were recorded, 1 m far from each other.

The entrance of the fortification from the time of construction is not known however, on the southern side, a break was on the wall at the first phase, which was walled off later with a narrower walling. While the construction of a stand-alone U-shaped tower at that point of the fortification is very unlikely, it is feasible that a part of the former entrance came to light here. (Fig.17./4. Trench 71/E)

As the northern sidewall of the fortification was faced to the slopes of the Sibrik hill, a further protecting system was also needed. Along the northern side of the wall double ditch was traced. The first ditch was located 6-12 m from the fortification the deepest point of which was at 10 m, at around 220 cm in depth. The second ditch was located 33 m far from the fortification. That ditch was bigger in size, the deepest point of it is was not yet found at the depth of 240m. Presumably the same ditch was traced on the southern side of the fortification. On the western side however any trace of *vallum* was not found.

fortress, believed to have been founded by Alexander, the Macedonian, situated on the most distant border of Mesopotamia, and surrounded with winding walls full of projecting angles, and so well furnished at all points as to be almost unassailable.” Ammianus Marcellinus, *Roman History*. (London: Bohn, 1862) Book 20., 211-242. Translated by C.D.Yonge http://www.ccel.org/ccel/pearse/morefathers/files/ammianus_20_book20.htm#C7 (last accessed 2011-05-17) For more description of the technique see: Borhy László, “Que era Murus Sinuosus et Cornutus (Amm. Marc., XX 7,17)?,” *Gerión* 14 (1996): 223-231.

The fortification wall was strengthened with wing-shaped towers on the corner. Two of the wing-shaped towers were completely unearthed. The tower on the southwestern corner had 120 cm width wall, with a 145 cm wide footing. The entrance of the tower consisted of two parts. On the northern side a stone wall was built. On the southern side however, numerous burnt wattle and daub were found, which implies the existence of a wooden structure, or a palisade door. Outside of the tower on the inner side of the fortified wall (that is in the fortification area) a devastation layer was traced beneath of which an intensely burnt trodden surface, the surface of the tower came to light. (Fig.15/1.)

Inside the fan shaped tower, situated on the southeastern corner of the fortification, the surface was covered with small pebbles trod into the floor. On the eastern wall of the tower a side gate was opened. Traces of a second Roman period can be seen in the tower, where the second surface covers a layer with Roman roof tiles. (Fig.15/2.)

On the third, northeastern corner of the fortification the existence of another fan-shaped tower was presumed by the excavators, however its exact location is still unknown. Although small trenches were opened to trace the walling of the tower, it seems that it is situated under a still standing building, therefore it cannot be unearthed.

Among the fan-shaped towers 11 U-shaped towers were also came to light, four of which were situated on the north wall (No.2-3-4-5), another four on the south (No. 6-7-8-9) and three on the eastern wall (No. 10-11-1) of the fortification. (Fig.16) The towers are contemporaneous with the enclosure wall.

According to the documentation the towers somehow differ in shape and size. The foundation of the towers is approximately 100-140 wide. The two sidewalls are straight, enclosed with the third arc-shaped wall. The only exception is tower No.5 which sidewall is not straight, rather curved, similarly with the sidewalls of the fan-shaped towers. (Fig.16/5.) The foundation of the towers was built without any binder while the superstructure was built with stones laid in binder. The inner size of the towers varies between 220-320 cm. The floors were worked up in different ways, from burnt trodden surfaces (No. 6,7), covered with brick (No. 1) or covered with terrazzo(No.4). Burnt wooden remains came to light inside tower No 4 presuming the existence of the roof made of wooden beams covered with roof tiles. Tower No 6 and No 7 were also supplemented with fire-places. In tower No 6. the floor of the oven was daubed with clay, with small pebbles on the edges. In tower No 7 the oven is semicircular, covered with roof tiles.

The walls of the towers maintained in different condition depending on their location, except tower No 11 which was completely demolished in the Roman period. The wall of this tower was completely broken down, only the foundation remained. (Fig.16/10.) At the same time, the adjacent walls were also demolished. Instead of the U-shaped tower a new gate system was constructed there. The gate consisted of three wing-shaped pillars covered with stone ashlars. In the last Roman period this western gate got a new function. On the western side of the gate a square-shaped tower was built, in the centre which a round-shaped column was erected. Beside the round pillar two square-shaped columns were placed. On the left and right side of these pillars, beside the wall of the tower, two small pillars were also added to the system. These pillars were used to support the upper floor of the building.

Besides the altering of the western part, new buildings were erected inside the castle area. They were constructed later than the enclosure wall, while their foundation was built on the top of the wall footing. Furthermore the mortar was also different: rather yellowish in colour, than the white mortar of the fortification wall. The buildings were constructed from andesite, with *opus incertum* technique; the stones were laid into the mortar without any regular ordering.³⁷ The walls of these buildings were quite weak; it is feasible that they were completely demolished in a short period of time.

Inside the fortification area at least four buildings were built, three of which were attached right to the wall. In the southeastern corner of the inner area three stone buildings were erected. Building A, a single roomed oblong shaped building with 60 cm wide walls was attached to the southern side of the fortification, located between Tower Nr 6 and 7. Inside the wall, in parallel with the fortification wall, at 100-120 cm from it a small ditch was traced. The ditch – 40-50 cm wide, 15 cm in depth - was run along the building from one side to another, on both sides and at the bottom of the ditch a greenish clay surfaces were recorded and it was filled with fine grey cinder. In the middle of the western sidewall an entrance/doorway was recorded. Outside the building, postholes and two fireplaces were recorded. Furthermore at the northwestern corner of the building foundation of another wall came to light. (Fig.15/3.)

Along the fortification wall next to Building A, a three-roomed stone building 'Building B' was built. Furthermore the western wall of the third building 'Building C' was unearthed in the fortification area the wall of which is similar to those of

³⁷ Russell Sturgis, *Sturgis' Illustrated Dictionary of Architecture and Building: An Unabridged Reprint of the 1901-2 Edition*. Vol. III. (New York: Dover Publications, 1989) 24, Hajnóczy J. Gyula, *Pannónia római romjai* (Roman ruins of Pannonia) (Budapest: Műszaki Könyvkiadó, 1987) 29.

building A and B. Two postholes were also found outside of the wall of ‘Building C.’ (Fig.15/4-6.)

On the Western part of the fortification, south from the square-shaped western tower another building was attached to the inner side of the wall. A two roomed building was uncovered here. On the eastern side of the building facing to the inner part of the fortification five square shaped stone footing refer to the existence of a *porticus*.³⁸ The 4x4 cm sized ground sleeve was used to hold the tenon of the presumably wooden piers. There was an entrance on the northern sidewall, with a surface covered with roof tiles in its outer side. Inside the building a trodden surface was uncovered. (Fig.15/4, 21/5-6, 22/1.)

Beside the stone buildings pits and standalone ovens can be dated to the Roman period, the accurate chronological ordering of which however is a question for further research.

II.1.2. Characteristic finds from the Roman period

Besides the written sources the inscriptions³⁹ and the artifacts are used to confirm the chronological determination. A great number of Roman coin came to light during the excavations, which provide a primary chronological determination.⁴⁰ Within the potsherds the material mainly consists of dark colored spaded or grey

³⁸ Hajnóczy, *Pannónia római romjai...*, 31; Fig 14/1.; Russell Sturgis, *Sturgis' Illustrated Dictionary...* 188

³⁹ On the inscriptions see Epigraphische Datenbank Heidelberg : i.e. HD010127 <http://edh-www.adw.uni-heidelberg.de/EDH/inschrift/010127>; /last accessed 2010.09.02./, Soproni Sándor, *Die Spätromische Limes zwischen Esztergom und Szentendre* (Budapest: Akadémiai Kiadó, 1978) 55-59

⁴⁰ Although the coins are catalogued, recording the location and stratigraphic position, and a primary description is also available on them, I could not managed to analyze them. As the coins are stored in the Hungarian National Museum, the accurate determination is for further research.

houseware and several fragments of *mortarium* was also found. Furthermore glazed ware also came to light from the trenches.⁴¹ (Fig.23)

Glazed lamp /78.32.74/ Fig.23/1.

A peculiar object is the fragment of a footed glazed lamp. The green glazed fragment comes from the upper section of the foot which holds the upper part, the lamp itself. This type of lamp can be dated to the late Roman period (4th century). Analogues of this artifact came to light in Intercisa/Dunaújváros/⁴² and in Aquincum/Óbuda⁴³.

According to Iványi, these lamps were supplemented with a hollow tube, decorated with rings, or other plastic motifs.⁴⁴ The lamp can be either simple /Type XXII/ or decorated with horse figures.

Marble plate /61.1.4.1/ Fig.24/1.

Marble plate with relief depicting the Danubian Horseman.⁴⁵

Bronze belt /78.46.29/ Fig.24/4.

Cingulum, belt-plate of a military belt⁴⁶ According to Sommer's typology of Roman belts, rectangular open-work beltplates belong to Group 1, Sort 2 and Form B,

⁴¹ On the late Roman pottery of the area see: Ottományi Katalin, "Késő római kerámia a leányfalui őrtoronyból" (Late roman Ceramics from the Watch-Tower of Leányfalu) *Studia Commitatensia* 22 (1991): 5-144.

⁴² Pongrácz Zsuzsanna, "Glazed Lamps from Gorsium and Intercisa" *Alba Regia* 25 (1994) 89-93; B. Vágó Eszter, "Ausgrabungen in Intercisa (1957-1969)" *Alba Regia* 10 (1971) 109-119, t. XXXV-LIV.; Pongrácz Zsuzsanna, "Glasierte Lampen von den Ausgrabungen in Dunaújváros und in Tác," in *Glasierte Keramik in Pannonien*. Exhibiton catalog. (Székesfehérvár: König Sankt Stephan Museum, 1992) 71-74.

⁴³ Kuzsinszky Bálint, "A gázgyári római fazekastelep Aquincumban. Das Grosse Römische Töpferviertel in Aquincum bei Budapest," *BudRég* 11 (1932): 352-353.

⁴⁴ Iványi 1935 Taf. LXVIII 1-3, 7-9. 25-26. Iványi Dóra, *A pannóniai mécsesek. Tipológiai és kronológiai áttekintés - Die pannonischen Lampen. Eine typologisch-chronologische Übersicht*. DissPann Series 2. No.2. (Budapest: A Kir. Magyar Pázmány Péter Tudományegyetem Érem-és Régiségtani Intézete, 1935)

⁴⁵ For detailed description see Soproni Sándor, "A visegrádi római tábor és középkori vár" (The Roman fortification and the Medieval Castle at Visegrád) *Arch Ért* 81 (1954): 49-53. On the cult analogous finds see: Gábor Olivér, "A dunai lovasisten három újabb emléke Baranya megyéből – The Place of the New objects from Baranya among the Relics," *JPMÉ* 44-45 (1999-2000): 79-88.

type b. The peculiarity of this type is the rectangular, open work plate. Between this type of beltplates the open-work can be rounded or pelta shaped as well. According to Sommer, this belt can be dated to 290-400 along the Danube. Similar was found in Muthmannsdorf Austria ⁴⁷

Fibula /79.3.94/ Fig.24/2.

Crossbow brooch, fibula from the Late Roman period. It is a clothing equipment of a person who belongs to the military administration. After Prötter, the fibula belongs to type 3/4 C. It can be dated to c330-410. ⁴⁸

Fibula /79.7.79/ Fig.24/3.

Late Roman bronze fibula, belonging to the military administration clothing, decorated with dotted circle. According to Pötter it can be dated to c340-410. The fibula belongs to Pötter Type 3/4 B. ⁴⁹

Bronze plate /78.36.89/ Fig.24/4.

A fine bronze plate, with punched decoration.

Chess board /78.50.107/ Fig.25/1.

A board for 'Ludus latrunculorum' incised on a roof tile, tegula.

Glass vessel /78.36.81/ Fig.25/2.

Fragments of a presumably globular moss green bottle with outcurving edge, short cylindrical neck, with robust neck. The form, with typical moss green colour, belongs to Barkóczi Group 118. although these vessels usually have long neck without robust shoulder. Vessels from Group 118. are common grave goods in Late

⁴⁶ M. C. Bishop and J. C. N. Coulston, *Roman Military Equipment. From the Punic Wars to the Fall of Rome*, (London: Batsford, 1993) 173-179.

⁴⁷ Markus Sommer, *Die Gürtel und Gürtelbeschlüge des 4. und 5. Jahrhunderts im römischen Reich*. Bonner Hefte zur Vorgeschichte Nr 22. (Bonn: Für den Verein der Förderer des Instituts für Vor- und Frühgeschichte der Rheinischen Friedrich-Wilhelms-Universität Bonn, 1984) 34; 74-76.

⁴⁸ Philipp Marc Pröttel, "Zur Chronologie der Zwiebelknopffibeln," *JRGZM* 35/1 (1988): 358., 372.

⁴⁹ Philipp Marc Pröttel, *ibid.* p. 358, 372.

Roman cemeteries between c380-450, produced in several workshops along the Limes.⁵⁰

Bronze ring /79.35.148/ Fig.25/3.

Simple bronze seal ring decorated with double dotted circle. Analogues came to light from the Late Roman cemetery of Solva, Esztergom.⁵¹

The above presented material represents the military status of the fortification. Both the fibulae and the belt fitting improves an owner who belongs to the military administration. The chronology of the finds confirms the dating of the site, that the fortification was left abandoned before, the end of the 4th century.⁵²

II.1.3. 'Barbarian' times and the Avars

As the Roman military units left abandoned the fortification, new incomers moved into the area. The enclosure wall of the fortification was apparently still standing in the 4-5th century. Dwellings of the Germanic inhabitants were unearthed both in the inner part of the castle area, and near to the fortification wall. Remains of at least four semi subterranean dwelling were unearthed at the castle area. Dwelling no. 11 is located next to the southeastern fan-shaped corner attached to the fortification wall. The exact size of the dwelling is not known however at least three rows of posts were used to hold the sidewalls. The trodden surface of the house was renewed several times. The dating of the dwelling is based on its stratigraphic

⁵⁰ Barkóczi László, *Pannonische Glasfunde in Ungarn*. Studia Archaeologica IX. (Budapest: Akadémiai Kiadó, 1988): 137. Globular bottle with long cylindrical neck and outcurving edge.

⁵¹ H. Kelemen Márta, *Solva Esztergom későrómai temetői. Die Spätrömischen Gräberfelder von Esztergom*. ed. Ádám Szabó and Endre Tóth. Libelli Archaeologici Ser. Nov No. III. (Budapest: Magyar Nemzeti Múzeum, 2008) 139. Grave Nr243/1 Table 56 p266., Grave Nr 247/11. Table 58 p. 268.

⁵² Soproni Sándor, *Die Spätrömische Limes zwischen ...*

position; the first trodden surface was laid right above the Roman surface with stones and mortar.

Dwelling No 9. was built inside building A. The dwelling is app. 4x4 m, square shaped, with rounded corners. In the corner a post was erected. (Fig.17/8.) Dwelling No 12. with its oven was erected on the Roman destruction layer. The oven is on the outer side of the dwelling, round shaped, with steep dome. At the southwestern corner of dwelling Nr 10 posthole was found with diagonal post. The oven is round shaped on the outer side with plastered burnt surface. The dwelling had a second oven which was built in the southwestern corner. Some more pits and ovens are stemmed from this period their chronological sequence however cannot be determined.

From the 5th century onwards trace of habitation was not recorded on the site. From the 8th century, that is from the Avar period a belt fitting (78.14.79) came to light without stratigraphic context. (Fig.25/4.) The only photograph which is now available of the artifact suggests that the casted bronze fitting has straight sides with a rounded ending. It is decorated with tendril motifs enclosed within a frame; furthermore it is feasible that the straight ending was also decorated.⁵³ In the material another finds belonging to an Avar horizon cannot be identified therefore it is very much unlikely that there was a significant inhabitation – if there was any - in the Avar period.⁵⁴

⁵³ Due to the quality of the only available image of this fitting more detailed descriptions and analogues can hardly be identified, like Kisköre Grave No. 57 with tendrils. Garam Éva, *Das Awarenzeitliche Gräberfeld von Kisköre*. Fontes Archaeologici Hungariae. (Budapest: Akadémiai Kiadó, 1979) Taf 13/34-36.

⁵⁴ As the detailed analysis of the ceramic fragments is not a part of this thesis it is feasible that a more complex research could sort out an earlier group of the ceramics.

II.2. The Arpadian period

A significant re-habitation of the eleventh century was recorded at Sibrik-hill. In order to determine the extent of the re-use two main issues should be discussed. Previously the condition of the Roman remains and methods of their reconstruction needs to be analyzed; then the newly erected building structures should be presented.

II.2.1. Re-building and transformation of the Roman fortification system

According to the excavation documentation the medieval re-use of the Roman walls were traced in a great number of the trenches. On the western part of the area the enclosure wall was strengthened with a clayey stone walling. As the enclosure wall at that part of the fortification is faced to the steep drop of the hill the erosion was more intensive. In order to protect the outer walling from leaching an 80 cm width foundation layer was built under it of mortar and wattle-and-daub.

Transformation of the protecting towers

Re-using of the protecting towers was recorded in several cases. Both the southwestern and the southeastern fan-shaped tower were altered at the Arpadian period.

The southwestern fan-shaped tower was rebuilt into a square shaped form, where the western sidewall of the Arpadian tower was attached to the outer side of the former Roman entrance stone wall. Onto the other side of the Arpadian western wall, a stone cube was strengthened with a square shaped hole cut on it. Remains of charcoal laying in the cut imply the existence of a wooden structure, i.e. a gate from that period.

The fan-shape of the southeastern tower was not altered in the Arpadian period however both the entrance and the side gate of it were walled off. Furthermore on the outer side of the side gate and at the junction of the tower and the enclosure wall the fortification wall was also strengthened with a walling. As there is no trace of the entrance from the Arpadian period on the ground level it is feasible that the entrance of the tower was on a higher storey. Inside the tower two Arpadian niveau can be separated. The first is a surface is covered with mortar while the second Arpadian surface was also traced laid on a thin debris layer.

The U-shaped side towers were treated in different ways during the Arpadian periods. In tower No 3, 9, 10 only a small area was unearthed therefore is not possible to determine the extent of the re-use. In Tower No 1, 2, 6, 7, 8 any traces of Arpadian re-use cannot be identified.

It is only Tower No 4 and No 5 where the extents of the Arpadian re-use is considerable. In tower No 4 it seems that the inner part of the tower was also in use in the Arpadian period. The roof of the tower needed to be repaired and for that some kind of wooden structure was used. The only traces for that are the burnt wooden remains, without any postholes. The Roman walls however should have been still standing at this period, because on the two side of the walled off doorway the wall of the superstructure is still 150 cm high.

In case of tower No 5 the inner entrance of the tower was walled off in the Arpadian period. The walling was built on a destruction layer still reaching 2 m measured from the Roman doorway.

Re-use and relative chronology of the Western tower

It is clearly seen from the archaeological records, that the strong western tower was also reused in the Arpadian period. The walls of the western tower must have been strong enough to hold a newly built roof or upper floor, because there is no trace of strengthening of the walls of the tower.

First, the remains of the round column were demolished together with the walls attached to it. In order to form a flat surface on the ground level of the tower, a 10 cm thick mortar bed was laid. A system of posts was arranged in a grid inside the tower; the grid also extends to one more row on the outside of the tower. It seems that the fire-place, lying on the foundation of the U-shaped tower, is contemporaneous with the postholes. The entrance led to the inner part of the castle became also walled of in a certain period.

The surface corresponding with the postholes was covered with a thin destruction layer above of which other features came to light as well. Built on this layer two separate rooms were formed by adding a thin wall of quite poor quality. On the outer side of the Roman wall, a small tower was attached to the facade of the western tower with presumably a separate doorway. The building material of this small tower was similar to that of the inner wall. This layer can be dated more precisely with a St Ladislaus *denar*. (Fig.18, Fig.19/2.)

According to their stratigraphic sequences a relative chronological order of the features can be determined. In the excavation documentation the archaeologist determined three Arpadian periods in the tower, whereas the Ladislaus denar could date a second phase.⁵⁵ In a later publication however Mátyás Szőke suggested that in

⁵⁵ Szőke Mátyás, *Ásatási jelentés 1971*

the second phase of the reconstruction the former entrance was walled off in order to form a new entrance on a higher storey of the tower.⁵⁶ In both cases the archeologist suggested a three-phase altering of the tower.

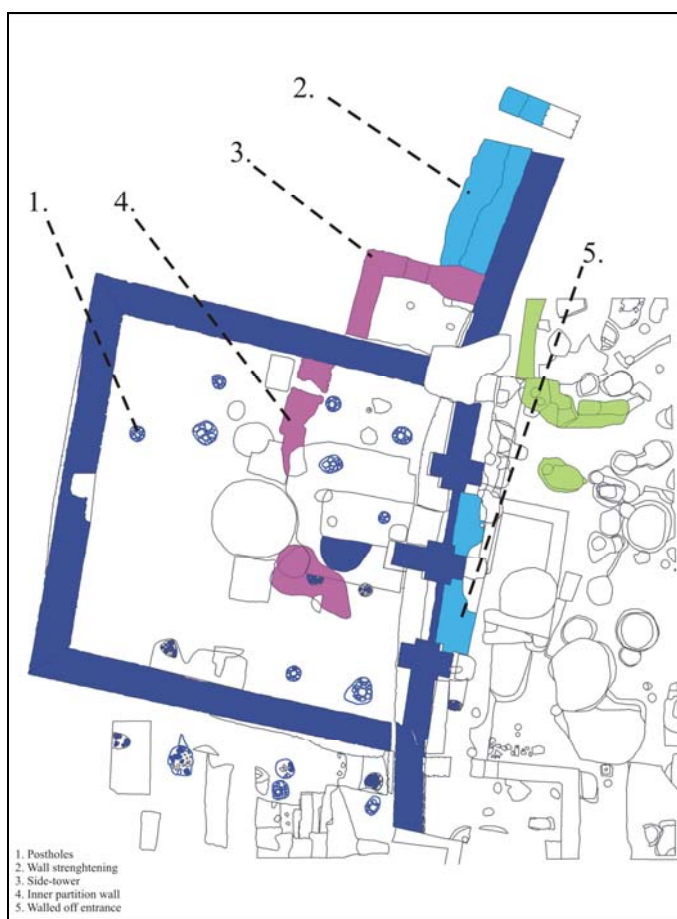
As a result of the revise of documentation some more information should be added in order to determine the chronology. In the first period of the Arpadian Age the new inhabitants renewed the inner part of the western tower. A grid-like post system was developed at this period, that may have helped during the reconstruction of the tower or it was aimed to hold an upper floor of it. The structure supported by these posts must have been demolished after a relatively short time. According to the excavation documentations the fire-place lying on the foundation of the U-shaped tower was contemporaneous with the postholes. Supposedly at the same time with the renewing of the tower the western enclosure wall of the fortification was strengthened as well.

On the destruction level of the first period remains of another construction was traced lying in a burnt layer with a coin of St. Ladislaus (1077-1095). According to their position it can be presumed that coin dates the inner wall itself rather than a period in between the post structure and the partition wall. Furthermore, based on the cross-sections recorded in the tower, the same destruction layer covers the enclosing of the entrance too. (Fig.19/2.) In that sense, the partition of the inner area of the tower could be dated with the St Ladislaus coin therefore here, two main surface and period can be separated. The accurate dating of the enclosing of the former Roman entrance is problematic although it could only be dated relatively earlier than the demolition of the partition wall. As a result it cannot be determined whether the enclosing wall is contemporaneous with the first or the second phase of the

⁵⁶ Szőke Mátyás, "The Medieval Castle of Visegrad" 363.

reconstruction or it belongs to a third period. In that sense in inner part of tower two main period can be supposed however their chronological connection with the enclosing of the entrance cannot be determined.

In addition to that, a small tower, perhaps a privy, was attached to the northern side of the tower. Although the small tower had its own doorway on the ground floor, there is no trace of an entrance from the 'privy' to the tower. It can be assumed, that both the small tower and the western tower had at least one upper storey. (Fig.20/3.- 4.)



The western tower

II.2.2. Transformation of the inner area of the Roman fortification

The features, unearthed in the *intra muros* area can offer more information on the function of the western tower. In the late Roman period, the existence of household units is a general feature within the fortifications.⁵⁷ In the Arpadian age the rate of habitation, protected or at least enclosed by a wall, is still unknown. According to the archaeological data, pit-houses were built within the castle. The location of these houses can also provide additional information.

It can be argued that the former Roman stone buildings inside the castle area were already demolished by the time of the Arpadians while newly erected buildings were constructed at the same place.

On the southeastern corner of the castle two stone buildings (building F, G) can be dated to the Arpadian period. (Fig.17/1-2.)

Only the 5x5 m square shaped foundation ditch of Building F remained. The wall of the superstructure was erected from the trodden surface. On the northeastern corner of the building a round shaped oven was built, made of Roman roof tiles and stones. At the east-western centerline of the building a ditch was traced. On the northern side of the building the foundation ditch was doubled therefore it is feasible that the building was protected with a thicker sidewall from the temperature or the oven was attached to the inner wall therefore it was needed to be strengthened.

After the construction of Building F another stone building was erected at this part of the castle area. Building F was completely demolished in order to erect Building E a two-roomed stone building with 80 cm width walling made of limestone

⁵⁷ Tóth Endre, "Late Roman forts in Pannonia," in *Hungarian Archaeology at the Turn of the Millennium*, editor-in-chief Zsolt Visy, (Budapest: Ministry of National Cultural Heritage Teleki László Foundation, 2003), 215-218.

ashlars, with a mortar surface on its outer side. At some parts the underlying stone walls of building A and B was broken off at the time of the construction. In the eastern room, an oven was attached to the north wall made of stones.

Besides the stone buildings remains of dwellings imply the using of the inner area of the castle. On the western side of the area, right next to the western tower a pit-house (No 8) was found, the roof of which was held by wooden ridge-pole and beams and the side walls were made of wattle and daub. On the same trodden surface right next to the pit-house, an oven with oblong shaped cinder-pit came to light. In the oven numerous burnt acorn laid. The stratigraphic position of the remains of the side walls under the beams and the great number of the acorn left in the oven implies a sudden event, maybe a fire, which perished the house and the kiln. (Fig.17/8)

The oblong-shaped pit-house No 4 is located to the southern side of the castle area. It is noteworthy that onto the southeastern corner of the house a stonewall (stones laid into clay) was attached. Furthermore on the western side of the house next to the stone wall a round oven was unearthed. Around the oven, four postholes were dug out which were used presumably to hold a roof over it. A stone was used in order to close the oven's mouth if needed. Inside the house the floor was not flat, but benches were found along them. (Fig.17/4.)

The 2.60 wide pit-house No. 7 is a square shaped house with a burnt floor. Both on its northern and southern side a posthole was dug out. On the northwestern corner an oblong shaped oven was found. (Fig.17/6.)

Other pit-houses were uncovered on the northern side of the area, outside of the castle next to the enclosure wall and in the vallum. Pit-house Nr 1. is located to

trench 70/3. The wall of the house, built of dry stone wall, was attached to the outer side of the fortification wall. The exact size of the house cannot be determined however its length is around 240 cm which can be estimated from the burnt layer came to light in the trench. The pit-house was presumably supplied with a fire-place made of stone pebbles remains of which was recorded at the bottom of the dry stone wall.

Remains of a pit-house were recorded in the northern vallum of the fortification as well. In trench 70/3, 200 cm above the present surface a layer with fragments from wattle, daub and charcoal came to light. The size and the shape of the dwelling cannot be estimated because section-drawing of the trench is not available.

Pit-house No.3 was located at the vallum close to the fortification. Its floor came to light 240 cm beneath the topsoil, 60 cm above the deepest point of the vallum. The width of the house was approximately 2,90 m, the length cannot be determined. The wall of the house was built of dry stone, while the roof was held by wooden ridge-pole and beams. The house had an oven inside at the southeastern side with a shallow cinder-pit. Most probably, another oven also belonged to this house. That oven was pear shaped with the diameter of 120 cm. The stratigraphical sequence between the two ovens cannot be determined from the documentation.

The spatial and chronological distribution of the features as well as the consecutive reconstructions of the western tower presumes that the castle area and its closest vicinity around the enclosing walls were continuously habited during the early Arpadian period.

II.2.3. Characteristic finds from the Arpadian-age

The most important find that can help the dating of the castle is the silver *denar* of St. Ladislaus minted between 1077-1095.⁵⁸ According to Sándor Soproni, coins of Peter (1038-1041, 1044-1046) and Salamon (1063-1074) were also found in the castle area. Unfortunately, more precise information is not available on these coins.⁵⁹

Among the metal objects the most numerous were knives and nails. Besides these objects, the metal tools can be divided into two main types. Both agricultural tools⁶⁰ and weapons were found near the western tower. An iron spade head, a sickle, and a cramp-iron were found in the trenches *intra muros*, beside potsherds dated to the tenth-eleventh century. Among the weaponry lozenge-headed arrowheads should be mentioned. This type of arrowhead is typical for the Conquest Period and the tenth century onwards.⁶¹ Besides the arrowheads a special piece of armour, a bronze spear with a wing shaped spike was found inside the castle. This so-called Carolingian winged spear is a characteristic object of the earlier period, but it is also known from the Conquest Period.⁶² Therefore, it cannot be used to date any features in the castle earlier as the late tenth or early eleventh century.

Besides the metal objects most of the artifacts are potsherds. Although a detailed analysis of the ceramics is not a part of my thesis I will give a brief overview of the material. Most of the ceramics were made on a slow wheel. The vessels are

⁵⁸ The chronological order of the ten different coins, minted by St Ladislaus is still a debating questions. Kovács László, *A kora Árpád-kori magyar pénzverésről* (On the Hungarian coin minting in the early Arpadian age.) VAH VII, (Budapest: Hungarian Academy of Science, 1997), 139-162.

⁵⁹ Soproni Sándor, "A visegrádi római tábor és középkori vár," (The Roman fortification and the Medieval Castle at Visegrád.) *ArchÉrt* 81 (1954): 49-53.

⁶⁰ Müller Róbert, "Die Datierung der mittelalterliche Eisengerätfunde in Ungarn," *ActaArchHung* 27 (1975): 59-102.

⁶¹ Kovács László, "Viselet, fegyverek" (Garment, armour), in Kristó Gyula ed. *Az Árpád-kor háborúi* (Wars of the Arpadian age), (Budapest: Zrínyi Kiadó, 1986), 216-313.

decorated with lines and waves, scraped in simple rows or in groups. (Fig.26/1.) Different types of marks, indicating potter's mark or magical meaning, were used to sign the pottery. (Fig.26/2.) Two pieces of clay caldrons (pottery, distinguished by rounded bases) were found in the area, one in the western tower, the other in the inner part. Although the dating of the clay vessels in the early Arpadian age is a debated question, their occurrence is relatively frequent in the Middle Ages from the early period of the Hungarian state formation.⁶³ An unusual type of potsherds is those with graphite added to the clay, which has yet to be satisfactorily explained. (Fig.26/3.) The place of origin of these presumably imported ware need to be analyzed further on. In addition from the St Andrews monastery early Moravian type graphite ware was found. Both the types of the Sibrik and of the monastery imply that besides the local ware, the import ceramics are also frequent at the study area representing the status of the inhabitants.⁶⁴

From the jewellery a bronze ring with a cross-motif and a plan ring made of copper need to be mentioned. A broken, but presumably s-ended hair lockring is a typical find from the early Arpadian period. Closest parallels for these objects can be found in the nearby cemeteries close to the excavated trenches. A mount with unknown function is one of the most impressive finds of the castle although its exact dating is problematic. According to the documentation simple pendants were also found in the castle area, but except a single photo only their description is available.

⁶² Kovács László, "A honfoglaló magyarok lándzsái és lándzsástemetkezésük. – Die Lanzen der Landnehmenden Ungarn und ihre Lanzenbestattung," *Alba Regia* 11 (1970), 81-108.

⁶³ Takács Miklós, *Die Arpadenzeitlichen Tonkessel im Karpatenbecken*. VAH I. (Budapest, Akadémiai Kiadó: 1986)

⁶⁴ *Keramische Bodenfunde aus Wien. Mittelalter-Neuzeit*. Exhibition catalogue. Ed.. Harl, Ortolf and Erben, Tino. (Wien:1982), Gabriele Scharrer-Liška, *Die hochmittelalterliche Grafitkeramik in Mitteleuropa und ihr Beitrag zur Wirtschaftsgeschichte* (Mainz: Verlag des Römisch-Germanischen Zentralmuseums, 2007) 29-66.

- Rings:** 78.14.80 (Fig.27/1.)
78.15.123 (Fig.27/2.)
- S-ended lockring:**
78.14.81. (Fig.27/3.)
- Mount:** 78.17.82. (Fig.27/4.)
- Pendants:** 78.18.24. (Fig.27/5.)
79.26.147
79.24.43
- Arrowheads:** 78.4.79 (Fig.27/6.)
79.28.28. (Fig.27/7.)
79.33.18 (Fig.27/8.)
80.16.2 (Fig.27/9.)
78.54.60 – bone (Fig.27/10.)
79.36.180 - bone
- Quillon of a sword:** 79.26.72 (Fig.27/11.)
- Bronze spare:** 79.37.52. (Fig.27/12.)
- Spade head:** 79.26.73. (Fig.27/13.)
- Sickle:** 79.26.74.
- Awl:** 80.26.1-2 (Fig.27/14.)

The versatile types of the finds suggest a significant re-habitation of the area. Both the numerous pottery and the agricultural tools help to demonstrate the every day life of the centre. Beside the objects of daily life, ornaments and weaponry are stemmed from the dwellings pretending the former activities. The presence of the different types of objects (weapons, agricultural tools, simple jewels, household pottery, import pottery) indicates a complex, most probably permanent usage of the inner area. This conclusion confirms the similar results of analysis based on the interpretation of the architectural elements of the fortification. The finds also show that the military function was important for the site, but other types of activities can also be reconstructed. Furthermore, the population which has occupied the site could not be described by simply a military group of the society.

The features and tools for household activities imply the every day usage of the castle area. The results of the analysis based on the architectural elements as well as on the ceramics presume an intentional usage of the site, presenting a systematic reconstruction and re-habitation of the desolate fortification. Both the reconstruction of the western tower and the building activities imply a significant change in the life of the castle. As the material consists of both military and household objects a defensive function as well as an everyday usage can be presumed. The transformation of the buildings however implies a functional change, from a rather defensive unit into a representative form.

From the chronological point of view nor the architectural features neither the finds suggest an earlier re-habitation then end of 10th century. As there is not any written source demonstrating the date of the abandonment of the castle and the structural analysis of the potsherd is still to be done, it can only be presumed, that the site was not in use from the thirteenth century.

III. RE-USE OF ROMAN FORTIFIED SITES IN THE ARPADIAN-AGE

Among other types of the early Arpadian centres a special group is those of castles which were re-built on Roman remains. According to István Bóna's work the two main style of using the Roman ruins are the following: on one hand the castle was built on Roman basis without transformation of the wall, on the other hand the Roman stonewalls were used as protecting walls of the castle. In addition,, another type of the re-use should be added: that is the use of the stones of the remains as building material in a new construction.⁶⁵ In this respect besides Visegrád, Óbuda, Pest, Sopron, Győr, Esztergom should be analyzed.

In the research of the castle at Visegrad, the re-organisation of the Roman structure was the most important factor. The function of the castle is strongly related to the conditions of the walls as they survived after the Roman period. The two strongly different views of the extent of the re-use are represented by István Bóna's opinion, and on the other hand the newly published reconstruction of Gergely Buzás.

According to István Bóna, in the tenth-eleventh century only a part of the Roman fortification was reconstructed. In his opinion, the Western tower –as it is shown by the archaeological data—was rebuilt, and used as a keep. In addition to that, only two or three of the towers were rebuilt, the other remains and the ruins of the wall only served as protecting walls. According to the reconstruction of Gergely

⁶⁵ I.e. „the massive robbing of Roman Gorsium” in order to build the new capital of Székesfehérvár. Niel Christie, “The survival of Roman settlement along the middle Danube: Pannonia from the forth to the tenth century A.D.,” *Alba Regia* 25 (1994): 303-313. p.312

Buzás however, the whole Roman structure was reconstructed and transformed to a royal fortification.⁶⁶ (Fig.29/2.)

The detailed analysis of the excavated features can help to solve the main issues concerning the castle. According to the results of the excavation the Roman structure could have remained in a good condition. The first argument against Bóna's opinion is that the traces of habitation were found in several places of the inner area. As a matter of fact, direct evidence on the re-building in most of the U-shaped towers cannot be found however the height of the still existing walls and the reconstruction activities on the other parts of the area as well as the existence of the two-roomed building implies that the stone walls had more significant function than to be a 'fence.'

In addition to that on the western side of the castle a complex restoration work of the wall and towers can be assumed. Here the wall is facing to the steep fall where the erosion could have stronger impact on the building structure. The former southwestern fan-shaped tower needed to be completely rebuilt into a square shaped form strengthened to the fortification wall. A wooden entrance leading into the castle area was located in the tower. Furthermore the western fortification wall was also strengthened in order to support a higher superstructure. Supposedly the similar wall strengthening was recorded in an unidentified trench northern along the wall as well. As a conclusion it is feasible that the entire western wall was reused in the Arpadian period. On the other part of the enclosure wall the rebuilding was executed in different ways. The entrances of the southeastern fan-shaped tower were walled off however it was not altered in shape. As any sign of the Arpadian entrance of the tower

⁶⁶Buzás Gergely, "Az 1000 éves Visegrád" (Millenium of Visegrád) *Várak, kastélyok, templomok*. 5/4 (2009) 4-7,

was not came to light but inside the tower the Arpadian surface can be identified; therefore it is very much feasible that the tower has at least one upper storey. Furthermore, the entrances of the U-shape towers No 4 and No 5 were also walled off.⁶⁷ The purpose of the Arpadian walling could be explained from two points of views. On one hand, the purpose is to enclose the tower which implies the opening of an entrance on a higher storey; or, on the other hand, if the superstructure of the tower is ruined than the walling was designed to enclose the fortified wall. In tower No. 4 remains of burnt wooden beams demonstrate the existence of a roof at the Arpadian age indicating the reconstruction of the tower rather than the enclosing of the wall.

On the southern side of the area, except the two fan-shaped towers, nor reuse neither reconstruction was traced in any U-shaped tower or along the wall.⁶⁸ As the walls on the western side needed a structural reconstruction it can be presumed that in contrast, these towers could be a significantly good condition where the rebuilding was not needed. This can be concluded furthermore from the fact that notable restoration and building work was conducted on the southeastern corner of the castle area. The reconstruction of the southeastern fan-shaped tower as well as the location of Building F and Building G implies, that the there the wall should have been in a significantly good condition.

In the case of the square-shaped western tower a significant restoration work can be identified. The outer sidewalls of the tower were not altered at all, only the eastern wall, leading towards the inner area, needed to be strengthened. The posthole

⁶⁷ It should be mentioned that tower No 5 does not have the typical U form. In size it is similar to the other U-shaped towers but the sidewall seems to be rather curved then straight. In the published material the fortification is depicted with three fan-shaped towers and U-shaped towers in between however it is probable that tower No 5 was also fan-shaped. Nevertheless at least one U-shape tower was somehow transformed, that is tower No. 4.

⁶⁸ According to the plaster analysis the narrow walling in trench No. 71/E can rather be dated to the second Roman period

system of the inner part suggests on one hand the reconstruction of the roof, or on the other hand the reconstruction of an upper storey.

As a conclusion it can be stated that although the fortification wall was not completely unearthed during the excavations, at those parts where the medieval re-use can be traced it was supposedly made with reconstructing purposes. As the Roman walls should have remained in a good condition it can be assumed the walls were used in their original function, namely as renovated enclosing walls and protecting towers of the castle area. Furthermore, according to the excavation documentation, remains of any other newly built protecting structures - made of stone or earth and wood - cannot be presumed.

As a comparison, other remains from the Roman period should be discussed.

The castle of Óbuda and Pest should be also discussed from this point of view, however the scarcely published historical or archaeological material does not give the opportunity for a detailed research.

In case of Óbuda the former ruins of Aquincum was not involved in the county organization of the Hungarian Kingdom. As the royal centre was located in Esztergom, in Óbuda a royal mansion were placed as an economic centre and important ecclesiastic centre.⁶⁹ (Fig.28/1.)

In case of Pest the enclosed area of the Roman castrum, located to Márcuis 15. square, was used as a cemetery in the early Arpadian period. By the mid 11th century Pest became a notable settlement where both a church and a royal mansion were erected, furthermore the Holy Virgin parish church stood on the southwestern corner of the fortification. It is feasible however, that the inner structures of the fortification

were already demolished by this time and the Roman remains were used as building material.⁷⁰ (Fig.28/2.)

At the castle of Sopron, the re-use of the Roman remains were examined in detail. According to Gömöri, the protecting walls of Roman Scarbantia served as a basis for the Arpadian settlement. Here, a large earthwork was constructed in the inner area, attached to the Roman fortification walls in a way that the stone wall formed the outer facade of the fortification. On the top of the earthwork construction a wooden palisade was also erected. Based on the stratigraphic sequences, in Sopron, the walls served as a kind of foundation or, rather as a supporting wall for the wide palisade structure.

The castle was aimed to protect and control the western and northern boundary of the kingdom. Being the centre of Sopron county, the castle was constructed at the end of the 10th or at the beginning of the 11th century and remained the seat of the *comes* until 1277. Inside the castle area dwellings and workshops of military units were also found. Furthermore, in the vicinity of the castle remains of the archidiaconal church were also unearthed, presenting the connection of the administrative and the ecclesiastical units.⁷¹ (Fig.28/3., Fig.29/4.)

A new typology based on the comparison of the structures of the Arpadian fortifications was given by Maxim Mordovin. According to this typology both Sopron and Visegrád belong to the same group, to the so-called ‘Simple fortifications with mortared stone wall’ group. Nevertheless, he drew the attention on the main

⁶⁹ Altmann Julianna, “Óbuda,” in *Medium Regni*, 91-114; Írásné Melis Katalin, “Régészeti adatok a budapesti 11-13. századi királyi udvarhelyek kutatásához,” (Archaeological data on 11-13th century royal seats of Budapest) *BudRég* 33 (1999): 291-312. p.292-293.

⁷⁰ Ibid.: p.308. Írásné Melis Katalin, *Adatok a pesti-síkság Árpád-kori településtörténetéhez*. (Data on Arpadian settlement system of Pest) (Budapest: Budapesti Történeti Múzeum, 1983) 34.

difference between Sopron and Visegrád, namely the function of the Roman walls.⁷²

While in Sopron the walls served as a foundation for the newly built structures; in Visegrád as a result of the reconstruction, the walls could serve as protecting enclosure, as they served originally in the Roman period too.

In case of Győr, the survival and reuse of the Roman structures is a problematic issue.⁷³ (Fig.28/4.) According to Bóna, the early bailiff's castle can be located in the former fortification of Arrabona. Here, Bóna states another issue that should be considered in the reconstruction of Visegrád as well, that is the original height of the Roman walls. As Bóna claimed, the foundation of the fortification of Arrabona was 320 cm wide, therefore the wall of the superstructure could be 9 m, while the towers 12 m high. As the walls came to light at the excavations were only 2-3 m high, these should be considered as ruined in the Middle Ages too. In this respect the 150-200 cm high walls of Visegrád could be also considered as ruined walls, which would confirm Bóna's opinion. Nevertheless, the foundation of the Roman wall in Visegrád hardly reaches the 2 m width, which could hardly imply 9 m as the originally high of the superstructure. In addition to that the multi-storied structures imply the existence of higher walls.

Another type of re-use of Roman remains can be traced in the fortification of Solva, Esztergom-Castle hill. (Fig.28/5.) The enclosure wall of the fortification is not

⁷¹ Gömöri János, *Castrum Sopron. Sopron vára és környéke az Árpád-korban. Die Burg von Sopron (Ödenburg) in der Árpádenzeit* (Sopron: Scarbantia Társaság, 2002)

⁷² Mordovim Maxim, "A vártartomány-szervezet kialakulása a kelet-közép-európai államokban. 10-12. századi központi várak a Cseh, Lengyel és Magyar Királyságban" (Formation of county systems in East-Central Europe. Central castles in the Czech, Polish and Hungarian Kingdom) PhD Dissertation (Budapest: 2010) 147.

⁷³ Ibid., 147.

known however, some of the inner building structures were unearthed.⁷⁴ According to the excavations of István Horváth, in the Arpadian period an earthen palisade was built in order to divide the area into two parts: the northern inner castle and the southern outer castle. In this respect Esztergom is an example where the Roman structure was not used properly.⁷⁵

As a conclusion it can be stated that, compared to the remains of Sopron, Győr, or Esztergom, the extent of the re-use in the Middle Ages is remarkable in Visegrád. It is feasible that among the above mention castles Visegrád is unique, because the results of the excavations strongly suggest that the Roman walls were reconstructed and used similarly to their original function; that is for enclosing the area and protecting the structures inside therefore it can be considered as a stone castle. It should be distinguished however from the early stone castles, like Székesfehérvár⁷⁶, where only the building material stemmed from the Roman period, while the castle itself was not erected on the Roman remains.

⁷⁴ Soproni Sándor, *Der Spätromische Limes Zwischen Esztergom und Szentendre*. (Budapest: Akadémiai Kiadó, 1978) 16-21.; Soproni Sándor, *Die Letzten Jahrzehnte des Pannonischen Limes*. (München: C. H. Beck'sche Verlagsbuchhandlung, 1985) 60-61.

⁷⁵ Horváth István, "Esztergom Szent István korában," (Esztergom under the reign of St Stephan) in *Europe's Centre Around AD 1000*. ed. Alfried Wiczorek and Hans-Marin Hinz, (Stuttgart: Theiss, 2000) 359-360. Buzás Gergely, "Az esztergomi vár románkori és gótikus épületei" (Roman and gothic buildings in the castle of Esztergom) in. *Az Esztergomi Vármúzeum kőtárának katalógusai*. (Catalogues of the Castle Museum of Esztergom) Az Esztergomi Vármúzeum Füzetek 2. ed. Gergely Buzás and Gergely Tolnai, (Esztergom: 2004)

⁷⁶ Bóna, *Az Árpádok korai várai...* 51.

IV. A ROYAL CENTRE AT VISEGRÁD AND THE KINGDOM OF THE EARLY ARPADIANS

Due to the importance of the donation charter Visegrád took a significant place in the historical research on the early Hungarian counties and their centers. Previous researchers have described the function of the fortification as a royal administrative centre, a bailiff's castle. Scholars tried, on the one hand, to determine the boundaries of the county and, on the other hand, to identify its centre. The term *civitas*, as Visegrad is titled in the aforementioned charter, was explained in several ways. In the charters of the early Hungarian Kingdom the *civitas* referred to a castle, a place strengthened by walls. Furthermore *civitas* was also the centre of those territories which was connected administratively to each other.⁷⁷ From the 11th century onwards in the historical sources any other mention on the county of Visegrád cannot be found, it is feasible that by the end of the 13th century the whole territory was fallen into parts and become annexed by another counties.⁷⁸

Nevertheless the archaeological research was aimed to identify the location of the county centre, namely to archaeologically determine the fortified area. In case of other counties, different types of fortifications were used as administrative units. The basis of the differentiation between the fortifications was their construction technique. The so-called 'earthen forts' and the castles with stone walls are the two main groups of early fortifications.⁷⁹ (Fig.29/1., 3) In case of Visegrád, the first excavations which were led on the site, clarified the location of the bailiff's centre at the Sibrik hill. As in the surroundings of the castle contemporaneous features - a church with two building periods and cemeteries, a settlement with its parish church and a monastery - were

⁷⁷ Kristó Gyula, *A vármegyék kialakulása Magyarországon* (Formation of the Hungarian counties) (Budapest: Magvető Könyvkiadó, 1988) 39-40. ; 147.

also unearthed, the whole complexity of a royal centre should be investigated. As the great part of the material of the other features of still unpublished, the functional analysis of the castle is rather provisional.

As a written source of the creation of Visegrád county is not available, the date of the re-habitation of the castle is still in question. The donation charter can be dated to 1009,⁸⁰ furthermore it is feasible that by that time the Roman fortification was already re-habited. As Prince Géza moved the royal seat into Esztergom at the third part of the tenth century, the re-habitation of the castle could also be contemporaneous with it and the last two decades of the tenth century can be seen as the time of re-habitation. It should be noted however, that the chronological determination is based rather on topographical relations and historical-political events, while the architectural elements or the excavated material cannot directly confirm the aforementioned dating. Nevertheless it is likely that the reconstructions or renovations were begun at the end of the tenth century, and reached a form that could have considered as a *castrum* by 1009. Furthermore it can be stated that the castle area was in use in –at least – the next

⁷⁸ Zsoldos Attila, “Korai vármegyéink az újabb történelmi kutatások fényében”, (New results in the research of the early Hungarian centres) *Castrum* 11(2010) 5-13.

⁷⁹ Bóna István, *Az Árpádok korai várai* (Early castles of the Arpadians.) (Debrecen: Ethnica, 1998)

⁸⁰ According the historical research two /1002 or 1009/ can be found as the compilation datum of the charter. An early copy of the charter was dated to 1257. X. 20. Another charter, from 1342, mentions the original charter of St Stephen as well as the copy from 1257. The charter from 1342 mentions that Bishop Benedict III. (1298-1311) sent the two aforementioned earlier charters to Tihany in 1295 to create a copy of them. On the 1257-year copy the date 1009 was cited, however this datum was not copied into the 1295-version. Imre Szentpétery, the distinguished scholar of the Arpadian-age charters, analyzed the 1257-copy. He stated that the original charter could have compiled by Heribert C, who arrived to the royal seat of Stephan I. in 1002 where he could have compiled the donation charter as one of his first works. Later on, the historian György Gyöffy argued that the compiler of the charter was rather an italian scriptor and year 1009 is a more probable dating for the compilation. Dr Karácsonyi János, “Szent-István király oklevelei és Szilveszter-bulla,” (Charters of St. Stephan and the Szilveszter-bulla) (Budapest: 1891) 67; Szentpétery Imre, Szent István király pécsváradai és pécsi alapítólevele. (Foundation charter of St. Stephen for Pécsvárad and Pécs) (Budapest: 1918) 52; Gyöffy György, “Székesfehérvár feltűnése a történelmi forrásokban,” “Székesfehérvár in the historical sources) in Székesfehérvár évszázadai (Centuries of Székesfehérvár) vol I. ed. Alán Kraloványszky, (Székesfehérvár: 1967) 22-; Géza Érszegi, I. (Szent) István veszprémi adománylevele (Donation Charter to Veszprém) in István Hermann and Balázs Karlinszky eds. Megyetörténet. Egyház- és

century, as it is shown from the reconstructed or newly built buildings. The use of the castle is confirmed by the different types of buildings with different functional aims, which further imply owners, belonging to various social rank.

After a certain period the castle left abandoned again and no more trace of re-habitation was recorded later on. The accurate dating of the devastation of the castle was another issue in the history of the site. In the previous research the last abandonment was supposed belonging to the Tatar Invasion in 1241-1242. The main argument for this dating was the construction of the Upper and Lower castle of Visegrád.

As a matter of fact there is not any direct evidence on the final abandonment of the castle, therefore it is still a debated question. If the Tatar invasion would perish the castle, a burnt layer or a devastation layer should be recorded. In the excavated trenches however traces of a sudden devastation can be traced only in two pit-houses (No 8, No3) where the burnt structures of the wooden beams can suggest a devastation which was short in time. Furthermore, the oven left with burnt acorn could suggest a sudden leaving of the castle area.

As accurate dating of the devastation of these pit-houses cannot be given, therefore it cannot serve as a direct evidence for the destruction of all the castle. Furthermore on the other part of the site no traces of a momentary attack or destruction can be traced, therefore at the present there is no direct evidence for the assumption, that the Tatar invasion ruined the area, though after the time of the Tatar invasion, according to the finds, no habitation can be traced there.

As a conclusion it can be stated that the castle was rehabited by the end of the tenth century and left abandoned sometime through the thirteenth century, however

igazgatástörténeti tanulmányok a veszprémi püspökség 1009. évi adománylevele tiszteletére. (County History) (Veszprém: 2010) 9-32.

accurate date of devastation cannot be determined. However the accurate and systematic analysis of the finds is for further research it should be noted that the material would suggest an earlier devastation. In the question of dating the final abandonment a comparative analysis should be done with the material of archidiaconal church and cemetery.

Besides the foundation and the abandonment of the castle the main issue of the previous research was to determine its function. As mentioned before, from the end of the tenth century the castle can be identified with the centre of Visegrád county. According to the historical research however it is demonstrated that the county seat was moved from Visegrád to Esztergom around 1070, and it is acceptable that the territories of the former county would attached to other counties. Furthermore, a historical source stated that Solomon had been kept in Visegrád in 1083, therefore another question should be raised: that is the function of the castle in the next decades. It should be emphasized that in Visegrád at the *intra muros* area significant habitation elements were traced. Furthermore the location of the castle, being close to the royal centres (like Esztergom) or to the royal mansions (like Dömös) could suggest a special function.

According to the excavated features the function of the western tower from the first period is rather defensive, while in the later period, erecting the small side-tower presumes a more residential function. Furthermore the side-tower has its own entrance from outside of the fortification area. As there is no other trace of a doorway on the ground floor of the castle, and the post system suggests an at least a two-storey building. It could be presumed that the enclosing wall of the entrance is contemporaneous with the post system. The inner arrangement of the tower is

determined by the posthole system. These postholes were used either during the reconstruction or to hold the upper floor and separate the inner space.

In that period the castle could bear rather residential function.

Regarding the functional questions the southeastern part of the inner area should also be discussed, where, right above the ruins of the Roman buildings (A, B, C) in the Arpadian period two stone buildings were erected. First a square shaped small building was erected then, it was completely demolished, and a two-roomed house was built at the same place supported with a stone oven. The function of the two-roomed building was determined as 'royal house' or at least residential dwelling.

Although the western tower was renewed twice and the palace was built right on the place of a former building, the chronological sequence between the two part of the area cannot be exactly determined, however, the first, rather defensive tower could bear the function as bailiff's castle. In that sense it could be compared to the earliest phase of the castle at Esztergom, where a square-shaped tower and an oblong shaped stone building was erected.⁸¹ (Fig28/5.)

In the castle, a devastation period and of a certain building is dated with a coin of St. Ladislaus. It is feasible that the quadrangle tower was transformed to a keep-like tower, with some kind of residential functions where a royal relative, Solomon, could be kept. The side-tower of the second period shows on one hand a less defensive function (i.e. built from narrower walling with entrance on the outer side) on the other hand suggests a multi-storeyed square shape tower while there is no trace

⁸¹ Buzás Gergely, "Esztergom" 8.

of entrance between the two parts. Furthermore it can be supposed that the building of the side-tower is contemporaneous with the two roomed stone house.

The vallum could have also been still significant by the time of the Arpadians though the Roman devastation reached a certain height. Nevertheless the vallum lost its protecting function while dwellings were built into it.

As a result of the geophysical survey of 2010 existence of a church is also supposed in the castle area. (Fig.30) Compared with contemporaneous centres it can be supposed that the church can be dated to the Arpadian period. In that sense the castle and the two-roomed stone building can be identified as a royal house, a residential dwelling, and the church can be seen as private church.⁸² The existence of that residential church raises another question in connection with the whole center of Visegrád that is the role of the archidiaconal church beside the castle.

⁸² Mordovim Maxim, "A vártartomány-szervezet kialakulása..." 190.

CONCLUSION

The topic of my thesis was to determine the extent of a re-use of a Roman fortification in the Arpadian-age and to present the archaeological elements of a county seat of the early Arpads.

In order to determine the chronological sequence of the site, I have collected both the archaeological and topographical material available at present and analyzed the archaeological features. After collecting the material (excavation documentation, maps, artifacts, topographical data) with a help of a GIS system the site-plans and drawings were combined. As a result I presented the functional and chronological elements of the elements and the rate of the re-use of the Roman remains as well.

According to the structural elements of the fortification and the chronology of the finds the fortification was in use in the Late Roman period and became abandoned before, the end of the 4th century. The material from Roman period clearly represents the military status of the fortification and implies owners belonging to the military administration.

From the Arpadian period systematic renovation can be traced. The two main Arpadian-age period of the Western tower can be compared to the reconstruction works of the other remains of the castle where two stone buildings were erected one after the other. As it is shown by the excavated features it can be supposed that at Visegrád, the Roman walls were not completely altered, but renewed in a particular extent, in order to transform it to a stone castle. In that sense Visegrád is unique among the early Arpadian castles or royal centres, where the Roman remains had not more than supplementary functions. Furthermore, the continuous habitation of the site can be confirmed for at least a century.

According to a restoration work in the Western tower, a functional change can also be suggested. It can be assumed that the first period of the restoration work is connected to the early bailiff's centre, while the second phase can imply a functional change, which is a transformation into a royal residence instead of being administrative unit.

In a further research results should be compared to other elements of Sibrik, namely to the comparative analysis of the church and the cemetery, and furthermore the comparison with the material of the settlement in the Várkert should be done. Both analysis should be laid both on the architectural and structural elements and on the artifacts, namely on the systematic analysis of the finds.

In order to determine the role of Visegrád more precisely in the history of early Arpads, the royal centres of the kingdom should be further analyzed based mainly on the available archaeological sources.

BIBLIOGRAPHY

Primary sources

Pattanytus-Á. Miklós. “Jelentés a visegrádi Sibrik dombon végzett régészeti célú geoelektromos mérésekről” [Unpublished report on the geophysical survey of Visegrád – Sibrik hill, 1985] Budapest: Magyar Állami Eötvös Loránd Geofizikai Intézet, 1985 Collection of the King Matthias Museum, Visegrád

Rómer Flóris. *Reports*, Library of the National Office of Cultural Heritage, 19414 KK, XIII, 126.

Soproni Sándor, “Ásatási napló 1951-1952” [Unpublished excavation reports 1951-1952], Collection of the King Matthias Museum, Visegrád.;

Szőke Máttyás. “Ásatási napló 1970-71, 1974-75, 1976-77, 1985” [Unpublished excavation reports 1970-71, 1974-75, 1976-77, 1985], Collection of the King Matthias Museum, Visegrád.

Diplomata Hungariae Antiquissima I, ed. Georgius Györffy, Budapest: In Aedibus Academiae Scientiarum Hungaricae, 1992

Scriptores Rerum Hungaricarum I-II, ed.: Emeritus Szentpétery, Budapest: Magyar Tudományos Akadémia, 1937-1938

Ammianus Marcellinus. *Res Gestae a Fine Corneli Taciti*.
<http://www.thelatinlibrary.com/ammianus/20.shtml#7> (last accessed 2011-05-17)

Ammianus Marcellinus. *Roman History*. (London: Bohn, 1862) Book 20., 211-242.
Translated by C.D.Yonge
http://www.ccel.org/ccel/pearse/morefathers/files/ammianus_20_book20.htm#C7 (last accessed 2011-05-17)

Maps

National Archives of Hungary. S 11 No 0207. *Visegrad dominii*. Michael Karpe – Regio Cameralis ordinarius. n.d.

National Archives of Hungary. S12 DIV XIV No41. *Delienatio angustias viarum ad ripam Danubii, circa coronale opidum Visegrad, ac reparationis ideam sistens*. Antal Balla. 1777.

National Archives of Hungary. S12 DIV XIII No496. *Situationis Planum neo erectae Viae ... Wysegrad* Michael Asboth – Jur. Geom. 1821.

Soproni Sándor ed. Topography of Roman remains in the Danube bend on Tabula Imperii Romani L34, Tabula Imperii Romani. Aquincum-Sarmizegetusa-Sirmium. Auf Grunde der Weltkarte 1: 1000000 Budapest: Akadémiai Kiadó 1968.

Az első katonai felmérés (First Military survey) Budapest: Arcanum, 2004, Coll. XIV. Sectio XVII.

Königreich Ungarn. The Second Military survey, Budapest: Arcanum, 2006, Section 48 Colonne XXXII, Section 47 Colonne XXXII

Ungarn, Siebenbürgen, Kroatien-Slawonien. The Third Military Survey. Budapest: Arcanum, 2007, Zone 14 Col XX

Secondary sources

Altmann Julianna, Biczó Piroska, Buzás Gergely, Horváth István, Kovács Annamária, Siklósi Gyula and Végh András eds. *Medium Regni. Medieval Hungarian Royal Seats*, (Budapest: Nap Kiadó, 1999), 115-162.

Bishop, M. C. and Coulston, J. C. N. *Roman Military Equipment. From the Punic Wars to the Fall of Rome*, (London: Batsford, 1993) 173-179.

B. Vágó Eszter. "Ausgrabungen in Intercisa (1957-1969)" *Alba Regia* 10 (1971) 109-119, t. XXXV-LIV.;

Barkóczi László. *Pannonische Glasfunde in Ungarn*. Studia Archaeologica IX. Budapest: Akadémiai Kiadó, 1988

Bökönyi Sándor. *History of Domestic Mammals in Central and Eastern Europe* Budapest: Akadémiai Kiadó, 1974.

Bóna István, *Az Árpádok korai várai* (Early castles of the Arpadians.) (Debrecen: Ethnica, 1998)

Borhy László. "Que era Murus Sinuosus et Cornutus (Amm. Marc., XX 7,17)?" *Gerión* 14 (1996): 223-231.

_____. *Notitia utraque cum Orientis tum Occidentis ultra Arcadii Honorique Caesarum tempora* Budapest: Pythae, 2003.

Buzás Gergely. "Az esztergomi vár románkori és gótikus épületei" (Roman and gothic buildings in the castle of Esztergom) in. *Az Esztergomi Vármúzeum kőtárának katalógusai*. (Catalogues of the Castle Museum of Esztergom) Az Esztergomi Vármúzeum Füzetek 2. ed. Gergely Buzás and Gergely Tolnai, (Esztergom: 2004)

- _____. *A visegrádi fellegrvár*. Visegrád: Magyar Nemzeti Múzeum Mátyás Király Múzeuma, 2006.
- _____. “Az 1000 éves Visegrád” (Millenium of Visegrád) *Várak, kastélyok, templomok*. 5/4 (2009) 4-7,
- Buzás Gergely and Eszes Bernadett. “XI századi görög monostor Visegrádon” (The Greek monastery of Visegrád, in the 11th century) *Architectura reigioasă medievală IV- Medieval Ecclesiastical Architecture in Transylvania - IV.*, ed. Péter Levente Szöcs and Adrian Andrei Rusu, 49-94. Satu Mare: Editura Muzeului Sătmăreau, 2007.
- Buzás, Gergely, Laszlovszky, József and Magyar, Károly. “Medieval royal centres,” in *Hungarian Archaeology at the Turn of the Millenium*, ed-in-chief Zsolt Visy, 348-363, Budapest: Teleki László Foundation, 2003,
- Christie, Niel. “The survival of Roman settlement along the middle Danube: Pannonia from the forth to the tenth century A.D.,” *Alba Regia* 25 (1994): 303-313.
- Engel, Pál. *The Realm of St Stephen. A History of Medieval Hungary, 895-1526* London: I.B. Tauris Publishers, 2001.
- Erdélyi, Balázs, “Régészeti légi fényképezés és légifénykép-értelemezés,” (Taking and interpreting archeological aerial photographs) *HOMÉ* 21 (1982) 81-88.
- Érszegi, Géza. I. (Szent) István veszprémi adománylevele (Donation Charter to Veszprém) in István Hermann and Balázs Karlinszky eds. *Megyetörténet. Egyház- és igazgatástörténeti tanulmányok a veszprémi püspökség 1009. évi adománylevele tiszteletére*. (County History) 9-32, Veszprém: 2010.
- Garam, Éva. *Das Awarenzeitliche Gräberfeld von Kisköre*. *Fontes Archaeologici Hungariae*. Budapest: Akadémiai Kiadó, 1979.
- Gábor, Olivér. “A dunai lovasisten három újabb emléke Baranya megyéből – The Place of the New objects from Baranya among the Relics,” *JPMÉ* 44-45 (1999-2000): 79-88.
- Gömöri, János. *Castrum Sopron. Sopron vára és környéke az Árpád-korban. Die Burg von Sopron (Ödenburg) in der Árpádenzeit* Sopron:Scarbantia Társaság, 2002
- Györffy, György. “Székesfehérvár feltűnése a történeti forrásokban,” “Székesfehérvár in the historical sources) in *Székesfehérvár évszázadai* (Centuries of Székesfehérvár) vol I. ed. Alán Kraloványzsky, Székesfehérvár: 1967.
- Harl, Ortolf and Erben, Tino eds. *Keramische Bodenfunde aus Wien. Mittelalter-Neuzeit*. Exhibition catalogue. Wien:1982.
- H. Kelemen, Márta. *Solva Esztergom későrómai temetői. Die Spätrömischen Gräberfelder von Esztergom*. ed. Ádám Szabó and Endre Tóth. *Libelli Archaeologici Ser. Nov No. III*. (Budapest: Magyar Nemzeti Múzeum, 2008)

- Hajnóczy J., Gyula. *Pannónia római romjai* (Roman ruins of Pannonia) Budapest: Műszaki Könyvkiadó, 1987.
- Horváth, István. "Esztergom Szent István korában," (Esztergom under the reign of St Stephan) in *Europe's Centre Around AD 1000*. ed. Alfried Wiczorek and Hans-Marin Hinz, 359-360, Stuttgart: Theiss, 2000.
- Írásné Melis, Katalin, *Adatok a pesti-síkság Árpád-kori településtörténetéhez*. (Data on Arpadian settlement system of Pest) Budapest: Budapesti Történeti Múzeum, 1983.
- _____. "Régészeti adatok a budapesti 11-13. századi királyi udvarhelyek kutatásához," (Archaeological data on 11-13th century royal seats of Budapest) *BudRég* 33 (1999): 291-312.
- Iván, László, *A visegrádi vár története a kezdetektől 1685-ig* Visegrád: Magyar Nemzeti Múzeum Mátyás Király Múzeuma, 2004.
- Iványi, Dóra. *A pannóniai mécsesek. Tipológiai és kronológiai áttekintés - Die pannonischen Lampen. Eine typologisch-chronologische Übersicht*. DissPann Series 2. No.2. Budapest: A Kir. Magyar Pázmány Péter Tudományegyetem Érem-és Régiségtani Intézete, 1935.
- Karácsonyi, János. "Szent-István király oklevelei és Szilveszter-bulla," (Charters of St. Stephan and the Szilveszter-bulla) Budapest: 1891.
- Kiss, Lajos. *Földrajzi nevek etimológiai szótára* (Etymological dictionary of geographical names) Budapest: Akadémiai Kiadó, 1980.
- Kodolányi, Judit. "A visegrádi esperesi templom" (Archidiaconal church at Visegrad),. MA Thesis, Budapest: ELTE Department of Archaeology, 2010
- Kondor, Katherine. "Diet and Social Stratification in Árpád-Period Hungary" *Annual of Medieval Studies at CEU* 13(2007): 51-73.
- Kovács, László. "A honfoglaló magyarok lándzsái és lándzsástemetkezésük. – Die Lanzen der Landnehmenden Ungarn und ihre Lanzenbestattung," *Alba Regia* 11 (1970), 81-108.
- _____. "Viselet, fegyverek" (Garment, armour), in Kristó Gyula ed. *Az Árpád-kor háborúi* (Wars of the Arpadian age), 216-313 Budapest: Zrínyi Kiadó, 1986,.
- _____. *A kora Árpád-kori magyar pénzverésről* (On the Hungarian coin minting in the early Arpadian age.) VAH VII, Budapest: Hungarian Academy of Science, 1997
- Kovalovszki, Júlia. "A Visegrád-várkerti Árpád-kori faluásatásról" (On the excavation of the village at Visegrád-Várkert) in *A magyar falu régésze Méri István 1911-1976* (The archaeologist of Hungarian villages Méri István 1911-1976) (Cegléd: Kossuth Museum, 1986), 61-63

- _____. "Ásatások a Várkertben" (Excavations at Várkert) *Műemlékvédelem* 39/2 (1995) 69-74.
- Kristó, Gyula. *A vármegyék kialakulása Magyarországon* (Formation of the Hungarian counties) Budapest: Magvető Könyvkiadó, 1988.
- Kumorovitz L., Bernát. "Buda (és Pest) fővárossá alakulásának kezdetei - Die Anfänge des Hauptstadtwerdens von Buda (und Pest)," *Tanulmányok Budapest Múltjából* 18 (1971): 7-57.
- Kuzsinszky, Bálint. "A gázgyári római fazekastelep Aquincumban. Das Grosse Römische Töpferviertel in Aquincum bei Budapest," *BudRég* 11 (1932): 352-353.
- Laszlovszky, József ed. *Medieval Visegrád. Royal castle, palace and Fransiscan friary*, Diss.Pann III. 4. (Budapest: ELTE, 1995)
- Mordovim, Maxim. "A vártartomány-szervezet kialakulása a kelet-közép-európai államokban. 10-12. századi központi várak a Cseh, Lengyel és Magyar Királyságban" (Formation of county systems in East-Central Europe. Central castles in the Czech, Polish and Hungarian Kingdom) PhD Dissertation Budapest: ELTE, 2010 147.
- Müller, Róbert. "Die Datierung der mittelalterliche Eisengerätfunde in Ungarn," *ActaArchHung* 27 (1975): 59-102.
- Ottományi, Katalin. "Késő római kerámia a leányfalui őrtoronyból" (Late roman Ceramics from the Watch-Tower of Leányfalu) *Studia Commitatensia* 22 (1991): 5-144.
- Pröttel, Philipp Marc. "Zur Chronologie der Zwiebelknopffibeln," *JRGZM* 35/1 (1988): 358., 372.
- Pongrácz, Zsuzsanna. "Glasierte Lampen von den Ausgrabungen in Dunaújváros und in Tác," in *Glasierte Keramik in Pannonien*. Exhibiton catalog. Székesfehérvár: König Sankt Stephan Museum, 1992.
- _____. "Glazed Lamps from Gorsium and Intercisa" *Alba Regia* 25 (1994) 89-93;
- Scharrer-Liška, Gabriele. *Die hochmittelalterliche Grafitkeramik in Mitteleuropa und ihr Beitrag zur Wirtschaftsgeschichte* Mainz: Verlag des Römisch-Germanischen Zentralmuseums, 2007
- Sommer, Markus. *Die Gürtel und Gürtelbeschläge des 4. und 5. Jahrhunderts im römischen Reich*. Bonner Hefte zur Vorgeschichte Nr 22. Bonn: Für den Verein der Förderer des Instituts für Vor-und Frühgeschichte der Rheinischen Friedrich-Wilhelms-Universität Bonn, 1984.
- Soproni, Sándor, "A visegrádi római tábor és középkori vár," (The Roman fortification and the Medieval Castle at Visegrád.) *ArchÉrt* 81 (1954): 49-53.

- _____. *Der Spätrömische Limes Zwischen Esztergom und Szentendre*. Budapest: Akadémiai Kiadó, 1978.
- _____. *Die Letzten Jahrzehnte des Pannonischen Limes*. München: C. H. Beck'sche Verlagsbuchhandlung, 1985.
- Sturgis, Russell. *Sturgis' Illustrated Dictionary of Architecture and Building: An Unabridged Reprint of the 1901-2 Edition*. Vol. III. (New York: Dover Publications, 1989)
- Szebeni, Andrea. "A visegrádi esperesi templom" (Archidiaconal church at Visegrad), MA Thesis, Budapest: ELTE Department of Art History, 2001
- Szentpétery, Imre. Szent István király pécsváradi és pécsi alapítólevele. (Foundation charter of St. Stephen for Pécsvárad and Pécs) Budapest: 1918
- Szőke, Mátyás. "The Medieval Castle of Visegrad" In *Europe's centre around AD 1000*, ed. Alfried Wiczorek and Hans-Martin Hinz, Stuttgart: Theiss, 2000
- Takács, Miklós, *Die Arpadenzeitlichen Tonkessel im Karpatenbecken*. VAH I. Budapest, Akadémiai Kiadó: 1986.
- Tolnai, Katalin, "Visegrád kora Árpád-kori emlékei" (Early Arpadian Remains of Visegrad) MA Thesis. Budapest: ELTE Department of Archaeology, 2007
- _____. " Régészeti feltárás térinformatikai támogatása" (GIS supported archaeological analysis) BSc Thesis. Székesfehérvár: WHU Faculty of Geoinformatics, 2008.
- _____. " Régészeti feltárás térinformatikai támogatása" (GIS supported archaeological analysis) *Geodesy and Cartography* 2009/02 (61) 23-27.
- Tóth, Endre. "Late Roman forts in Pannonia," in *Hungarian Archaeology at the Turn of the Millennium*, editor-in-chief Zsolt Visy, 215-218, Budapest: Ministry of National Cultural Heritage Teleki László Foundation, 2003.
- Veress, Endre. "Gróf Marsigli Alajos Ferdinánd olasz had mérnök jelentése és térképei Budavár 1684-1686-iki ostromairól, visszafoglalásáról és helyszínrajzáról" (Reports and maps on the 1648-686 year siege of Buda castle, by Count A.F Marsigli, Italian soldier), *Budapest Régiségei* 9 (1906): 103-170.
- Vékony, Gábor. "The History of Archaeological Fieldwork in Hungary," in *Hungarian Archaeology at the Turn of the Millenium*, ed. Zsolt Visy, 17-19, Budapest: Teleki László Foundation, 2003.
- Visy, Zsolt editor-in-chief. *Hungarian Archaeology at the Turn of the Millennium*, Budapest: Ministry of National Cultural Heritage Teleki László Foundation, 2003.
- Wenczel, Gusztáv. *Árpádkori új okmánytár* (Arpadian-age charters) Monumenta Hungariae Historica, vol. VII (XII.)-XII-(XXII) (Pest: 1869-1874)

Wieczorek, Alfried and Hinz, Hans-Martin, eds. *Europe's Centre Around AD 1000*. Stuttgart: Theiss, 2000.

Wolf, Mária. "Earthen forts," in *Hungarian Archaeology at the Turn of the Millenium*, ed-in-chief Zsolt Visy (Budapest: Teleki László Foundation, 2003), 328-332.

Zsoldos Attila. "Visegrád vármegye és utódai" (The county of Visegrád and what came after it) *Történelmi szemle* 40/1-2 (1998): 1-32.

_____. "Korai vármegyéink az újabb történeti kutatások fényében", (New results in the research of the early Hungarian centres) *Castrum* 11(2010) 5-13.

APPENDIX

Below I will briefly present the archaeological layers and the chronological sequences between the features excavated at the site. The aim of the description is to present the raw material on which the architectural analysis and the conclusion is based. I will present the result of the excavations year-by year, from trenches to trenches except the excavations 1974-75. In that case I only have the permission to briefly present the overall results instead of presenting all features. The artifacts coming from the different trenches are presently possessed by the Hungarian National Museum - King Matthias Museum Visegrad. The catalogue numbers listed with the trenches stemmed from the Museum's catalogue tables.. All the material presented hereunder was available through the courtesy of Mátyás Szőke.

Excavations 1951-52

In *Trench Nr.1* a 110 cm-wide Roman wall came to light right beneath the topsoil. On its outer side, the foundation was found at a depth of 30 cm. On the inner side however the topsoil was 30 cm thick, and a destruction layer and pebble-bed was found underneath. Both Late-Roman and early Arpadian household ware were found.

/Cat. Nr: 61.1.3.1.-61.1.3.45./

Trenches Nr. 2, 3 and 5 were opened to trace the southwestern tower of the fortification. At first, the wall of the fan-shaped tower came to light under a 10-15 cm thick topsoil. The wall is 120 cm wide while its foundation is 154 cm. The inner part of the tower was filled with subsoil. On the eastern part of the tower – at the connecting point of the tower and the wall of the fortification – a short wall was built which was the part of the entrance. On the other side of the tower however that wall cannot be found, remains of wattle and daub suggest that that this part of the entrance was made of palisade. On the outer side of this wall, and on the basement of the tower an Arpadian-age square-shaped wall came to light. Onto the outer side of this wall, a stone-cube was fixed, with a small square-shaped cut on it. Inside the cut remains of burnt wood, charcoal came to light. It seems the Arpadian-aged wall was built on the top of a Roman devastation layer. The hardly burnt devastation layer can be dated with a bronze coin from Constantinus Gallus. Furthermore a devoting table, made of marble

came to light under the devastation layer. /Cat. Nr. 55.1.1-55.1.85.; 61.1.1.1.-61.1.1.127.; 61.1.2.1.-61.1.2.15.; 61.1.4.1.-61.1.4.9./

In *Trench Nr 4*. 110-120 cm beneath the topsoil the Roman fortified wall came to light. Onto the outer side of the wall a tower was attached. The tower seems to be U-shaped. Both the walls were in bad condition. The junction point between the two walls was completely broken down.

In *Trench Nr 6*. the Roman wall was found 15-20 cm beneath the topsoil. The wall is 130 cm wide on the two sides of the trench, while only 100 cm wide in the middle. The middle part seems to be walled off. This walling seems to be the inner part of a tower. The thinner wall was built on a devastation layer. From the inner side of the wall at a depth of 60 cm fragments of a huge thick melting jar came to light with remains of cinder. /Cat. Nr. 61.1.5.1.-61.1.5.5./ On the outer side of the wall, a 50-55 cm thick devastation layer was found, mixed with mortar, stones, and burnt plaster fragments.

In *Trench Nr. 7* 10 cm beneath the topsoil ruins of a tower came to light, in which the trampled surface was already demolished. The entrance of the tower was walled off in the Arpadian period. The height of the Arpadian wall from the Roman door-step is 2 m. The Roman wall is 150 cm high. The wall of the fortification was broken through with a drainage ditch.

In *Trench Nr 8*. 10-15 cm beneath the topsoil, ruins of the fan-shaped Southeastern tower came to light. Here the wall of the tower was 120 cm wide and had a 150 cm wide basement.

Trench Nr. 9-10 were opened to locate the Northwestern fan-shaped tower of the fortification. It can be assumed from these trenches, that this tower is situated somehow under the building still standing on the site. Although the exact place of this tower is still unknown, remains of the fortified wall were found in *Trench Nr 10*. In *Trench Nr 11*. The fortification wall as well as a wall of a tower was unearthed.

In year 1952 the archaeologists of the Museum continued the excavations however, it is problematic to locate these trenches due to the lack of a detailed site plan. In *Trench Nr. 10* finally a short part of the Northwestern tower came to light. Here to the outer side of the wall another wall was attached. Inside the tower from 130 cm beneath the surface a white stone-floor was found. /Cat. Nr.61.1.6.1./

In *trench Nr. 11* inside the tower a devastation layer with charcoal was found. Under this layer a brown-yellowish layer with Arpadian-age ceramics, then a layer with roman roof-tiles came to light. Under the roof-tiles, Roman ceramics and a bone-tool was dug out. The Roman floor was made of terrazzo. This layer and the terrazzo-floor can be dated with a Julianus coin. The doorway of the tower was walled off. Furthermore a 10-12 cm thick layer was unearthed covering the door-way.

Next to the tower, inside the fortification, 150-170 cm beneath the topsoil a wall/?/ covered with mortar was found. The layers inside the fortification are the followings: topsoil, devastation layer, Arpadian layer, Roman devastation layer with roof-tiles./Cat. Nr.: 61.1.7.1.-61.1.7.8./

Trench Nr 12, 13, 14, 15 cannot be exactly located due to the absence of a site plan, although in Trench Nr 13 a 65 cm wide presumably Roman wall was found. Trench Nr16 was aimed to uncover the entrance tower presumably located on the Western side. In this trench only the fortification wall came to light. In trench Nr 17 only the wall was found without any trace of the entrance. In *Trenches A-B-C* another U-shaped tower was found. With *trenches D-E-F* the fortified wall was followed. In *Trench Nr. 18* a wall of another tower was found.

Excavations 1970-71

In the year 1970 a rescue excavation was held at Sibrik-hill when 3 trenches were opened. In *trench Nr. 70/3* the Roman wall came to light which remained 220 cm high. On the outer side at height 205-220 cm a narrow wall was attached to it. From the bottom of the wall 10-20 cm thick burnt layer was found which reached horizontally 240 cm. It seems that this layer belonged to a pit-house that was attached to the outer wall of the fortification. On the bottom of the layer pebbles were laid, which implies the existence of an oven.

2-7 m far from the tower a vallum was unearthed which was 2.40 cm in depth. At the depth of 60-80 cm a layer with Arpadian artifacts and charcoal came to light under which a narrow layer was dug up with wattle and daub. The deepest point of these layers was 150 cm from the surface.

At 23-24 m far from the wall at 150 cm from the surface a 80*50 cm pit was found. 33 m far from the wall another ditch/vallum came to lighting which at a depth of 135-175 cm a layer with charcoal was unearthed. At the depth of 210 cm the bottom of

the ditch was not reached. As the section of the layer was not recorded the layer structure is known only from the field notes.

In *trench Nr 70/4* the Roman wall rested 10 cm high. 6 m far from the wall a ditch was found. In this ditch three levels of layers were recorded. In the middle of the ditch on the bottom of the second dark grey layer Arpadian-age pottery came to light, under it the Roman devastation /?/ layer with brick fragments and rooftiles was dug up. Here, in order to excavate the Arpadian layer and to find the bottom of the ditch, the trench was widened into both directions. (*70/III A&B*).

In *Trench 70/III A* at 7 m from the roman wall a coin /denar/ from I Louis the Great (1342-1382) was found at the uppermost layer with fragments of Roman bricks and roof-tiles. Beneath the topsoil a 40 cm thick fill a 40-50 stone-layer was found. Under the stones a burnt wooden structure, remains of a ridge-pole and beams were found. The remains on a yellowish clay layer which could be the basement of the house. On the same layer remains of a kiln was also found. with a 22 cm high vault. The cinder-pit was also unearthed. The oven was round-shaped with the diameter of 120 cm, while the mouth of it was 50 cm. Under the floor of the house two shallow, irregular shaped pits came to light. On the other side of *Trench Nr 70 III/B* at 130 cm beneath the topsoil a pear-shaped oven came to light. The vault was 2.3 cm thick, while the mouth was 30 cm wide. A 30 cm deep cinder pit was attached to the kiln. Inside the pit, animal bone remains, mainly wild boar came to light.

As a few stone and charcoal was also found in the pit it seems that this part was also belonged to the previously mentioned house.

In *trench Nr 70/5* a u-shaped tower came to light 10-65 cm beneath the topsoil. Only the bottom part of the wall survived.

In 1971 nine trenches were unearthed on the eastern side of the fortification; they varied in size from 3x3 m to approximately 7x4 m. In order to understand the stratigraphic system, two cross-sections were recorded oriented North-South (trench No. IX, VI, II) and West-East (trench No. V, VI, VII).

During the excavation of the tower a complex architectural system was recorded. In *trench I* a 1.05-m-thick wall of the Roman fortification was discovered, and another thick wall was also found attached to it, oriented North-South. The foundation of the Roman wall served as a base for a pillar with a wing on each side. Beside the pillar a wall was found, also on the foundation of the wall, that closed the gate opening at a

later time. A 10-cm-thick mortar bed was found covering areas adjacent to the Roman wall, including some architectural elements and the “floor” of the tower. Two postholes were dug through the mortar bed showing that they are associated with the mortar layer.

The same system was found in *trench II*. The Roman wall was demolished and rebuilt into a winged pillar. The remains of the same masonry were found in this trench as well. The 10 cm thick mortar bed was also found here at the depth of 80 cm. From the mortar bed two postholes were dug. Under a thick layer of soil with mortar a strong Roman wall basis was found. The foundation was U-shaped indicating the existence of an earlier, originally U-shaped tower.

The features in *trench III* show the complex system of supporting structures. Here a third winged pillar was found, which indicates a double gate system. Under the pillar, the original Roman wall basis was also found with the same masonry beside the pillars. On the northern side of the masonry a narrow wall was built. The basement of the U-shaped tower was found here again. On the western side of the trench a wide wall, the sidewall of the square-shaped tower, was found in southern direction.

Trench IV was opened in order to observe the original Roman wall and the extra muros features built attached to it. On the eastern side of the trench the Roman wall was found. On the outer side of the wall a thick mortar layer mixed with small pebbles was found. On that layer a thick outer wall was attached to the Roman wall in order to fasten it. A small 70 x 70 cm square-shaped tower was built on the thick wall beside the western tower. On the northern side of the small tower a mortar bed shows presumably the doorway.

In order to excavate the middle part of the square-shaped western tower three *trenches (V, VI, VII)* were opened. In *trench V* built to the inner part of the sidewall of the tower a ruined wall was found. The ruined wall was built on a thick burnt layer. A coin of St. Ladislaus (1077-1095) came to light in the burnt layer lying under the wall. Beneath this layer a mortar layer was unearthed from where a posthole was dug. Beside the ruined wall, under the burnt layer a short Roman wall was also found. (Fig.7)

In the middle of *trench VI* a big round-shaped pit was found, which was once the basis of a round tower of which now only the last row of stones can be seen. In both sides of the circular tower a short rectangular wall was recovered. A mortar bed covers these walls from which a posthole was dug out. Above the foundation of the U-shaped tower a fire-place was found as well. In the central part of the trench remains of a demolished wall came to light.

In *trench VII* a thin wall built on a mortar bed was found next to the inner side of the tower wall. Beside the eastern wall of the tower a small rectangular wall was recorded.

In *trench VIII, IX, X* the southern wall of the tower and its two corners were found. The overall size of the tower is 11.75x11.75 m. Here, in the southern part of the tower four postholes came to light under the mortar bed.

In the same year 5 square shaped trenches were opened in order to examine the inner part of the castle.

In *Trench Nr. 71A* . A belt mount /78.14.79/, a ball button and a lockring /78.14.81/ came to light from the topsoil. In the trench details of two pit-houses and pits came to light. One of the pit-houses/?/ was supplied with a round kiln Both the house and the kiln were deepened into the yellow clayey soil. The kiln cuts a small pit or posthole. According to the stratigraphic sequence the posthole/?/ or small pit is older than the kiln, it was dug up earlier in time. In the same trench 4 pits were unearthed all of which are big in size. /78.14.108-126/

Pit Nr. 1 is round shaped with the diameter of 150-157 cm, the depth is 70 cm. On the southern side of the pit a posthole came to light. (d.: 40-50 cm, depth 45 cm) /78.14.82-84/

Pit Nr.2 was only partially excavated. /78.14.85-90/ The diameter of Pit Nr 3. was 130-135 cm, and 46 cm in depth. From the pits both Roman and Arpadian material came to light. A ring was also found here /78.14.80/, /78.14.91-107/.

In *trench 71/B* 5 pits and remains of a semi-sunken pit-house were unearthed. /78.15.1-98/ Then, 60 cm beneath the topsoil a surface with of burnt daub was found at a size of 120*140 cm. Both on the southern and northern sides of the surface a small posthole was found. Under burnt surface a square shaped pit-house came to light with an oblong-shape kiln on its northwestern side. Furthermore, to the southeastern corner, a U-shaped pit was also attached. It turned out, that the previously mentioned posthole belonged to also this house. Under the floor of the house two more pits came to light. Both pits were big in size, one of them was round while the other is oblong shaped. The round pit was 210 cm in depth. From the uppermost layer of this pit a bronze ring came to light./78.14.80/, with remains of snail shells /78.15.101.-78.15.123/. The oblong shaped pit was 60 cm in depth. Three more pits were found in the trench. The stratigraphic sequence of the features came to light in the trench are the followings: the

eldest is the oblong-shape pit, then the round pit. The house with its kiln lay on the two pits, therefore this is the youngest among them. The uppermost surface is the remain of the collapsed house. /78.15.124-78.15.129/

A 1m wide trench (71/C) was opened also in the inner area of the fortification. In this trench again a round pit was found with snail shells. /78.16.1-18/

Trench 71/D and E are located on the southern side, next to the fortification wall. In Trench 71/D two pit-houses and a pit were found. /78.17.1-78.17.26; 78.17.68-78.17.82/ The northwestern corner of the oblong shaped house was unearthed. On its southeast corner one row of a stone wall (195*65 cm) was found. On the southern side of the house a kiln was attached to it. The oven is round shaped the remains of its vault are 32-37 cm. The diameter of the oven is 120-140 cm. A stone placed into the mouth of the kiln. Furthermore on its outer side four narrow posts were placed, as it is shown from the postholes./78.17.27-78.17.62/ The floor of the house was not flat, it had a bench on the southern side. On the same level with the bench a layer with charcoal was dug out. The overall extent of the other house cannot be exactly determined. It may have a kiln as well, as it can be suggested from the burnt daub remains. /78.17.63-78.17.67/ Both the houses were laid around 60 cm beneath the topsoil.

In *trench 70/E* -which is situated next to 71/D- the Roman wall was traced./78.18.1-78.18.24/ Here the Roman wall has two parts. In the western part of the trench the wall is more narrow than it is on the eastern end. Though the mortar is the same, the thicker wall has a corner. Inside the wall, four narrow postholes were also found.

Excavations 1974-75

In *trench Nr 11* 40 cm beneath the topsoil a surface with stones from the ruined fortification was found. Under a thick debris layer at the depth of 110-135 cm postholes and fragments of daub came to light. It seems that these features are the remains of a Roman house built of daub and wattle. The walling of the fan-shaped tower was also recorded in this trench. Here the walling lies as 46 cm high above the Roman surface, built on a destruction layer. It seems that the fan shaped tower is contemporaneous with the Roman house, the destruction of which was followed by the walling of the tower. The mortar in the entrance of the tower is still 70 cm high, almost reaching the present

surface. Two Roman coins /79.7.58., 79.7.80/, a Roman fibula /79.7.79/ and a bronze disc /79.7.81/ were found in the trench.

In *Trench Nr 10* the Roman devastation layer came to light as well. On the Roman surface a round pit, a posthole padded with stone, and several stake holes (with smaller diameter) were found. /79.6.1-79.6.131/

In *trench Nr13* the uppermost 40 cm thick layer was mixed with stones and ashlar. A stamped fragment of a rim was found here./79.11.11/ On the outer side of the fan shaped tower a dry stone walling came to light, lying on the Roman destruction level. On the western side of the fan shaped tower a side gate was walled off. It seems that the walling at the gate is contemporaneous with the outer wall. The foundation of the fortification was found 200 cm beneath the topsoil. /79.11.1-14/

In *Tench Nr 12* /79.10.1-196, 80.6.1-4/ 65 cm beneath the topsoil a 30 cm thick devastation layer of a Roman house/?/ came to light with its postholes. Beneath the devastation layer a narrow plastered surface came to light.

In *trench Nr 14-15-16* the southeastern fan-shaped tower was unearthed. Here, the gate leading into the tower was walled off. This walling was found just under the present-day surface. The Arpadian floor was found 80 cm beneath the topsoil. Under the floor level the Roman destruction layer came to light with roof tile fragments. Under this layer laid the Roman trodden surface, 70 cm beneath the Arpadian niveau. Here in the trench two Roman and two Arpadian surface can be determined. The side gate of the tower was also walled off with dry stone walling. A narrow ditch, filled with ashy earth came to light between the tower walls. The second Roman period can be dated with a Terentius dux stamped brick fragment. In trench Nr 15 the connection between the side gate and the side walling was traced. It seems that these two features were built in the same period because they are built together.

In *trench 9* two round shaped pits, postholes and a kiln was found. In the uppermost layer, Pit Nr 1 was dug from the Roman trodden surface. From the pit a roman fibula came to light./79.3.93/ From the same level another pit was dug out, filled with debris and stones.

In *trench Nr 6*. sidewall of a Roman building came to light. The wall was attached to the fortification wall. It seems that a doorway/?/ was on the wall. Inside the building 3 postholes, and 5 shallow pit was found.

In *trench 3* a ditch, running outside of the fortification /presumably a vallum/ came to light, however further data on this trench is not available.

In *trench Nr 4* the fortification wall was found 15 cm beneath the surface. An inner partition was attached to the fortification wall, but it was built later than the protecting wall. In the middle of the trench, a ditch I was unearthed. On the foundation of the Roman wall, a kiln with Arpadian age material was found. Under the kiln, the wall was splitted away. In *trench Nr 8* the northern wall of the Roman building came to light. On its outer side a pebble-surface was found at 110 cm, which was connected to the kiln.

In *trench Nr39* the northeastern corner of an Arpadian age pit-house was found. On its outer side a plastered surface was unearthed 70 cm beneath the topsoil. The plastered surface laid on the devastation layer of a Roman building. In the Roman level, some pits were also unearthed.

In *trench Nr 38 and 39* both Arpadian and Roman periods were traced. 40 cm beneath the present surface a yellow clay layer came to light which covered the Roman devastation layer. The foundation of the Roman building is 15-20 cm wide, while its wall reached 55 cm. On its outer side two postholes were unearthed. Inside the building a burnt surface was recorded. Furthermore in *trench 38* two kilns were recovered. These kilns are shown on the site plan as well as on a photo, however their description is not available. /Their size can be determined from the site plan/

In *trench Nr 35* the wall of the Arpadian age stone house laid 35 cm beneath the surface. On its inner side a kiln was unearthed. The floor and the sides of the kiln were made of stones. The shape of the kiln is oval. The kiln was laid on the yellow clay surface which is the Arpadian niveau. The yellow clay surface covers the Roman devastation layer. From the Roman surface a pit and a ditch was dug out. A mount and a lunula shaped pendant came to light from the ashy layer. /78.51.42/

In *trench Nr 7* 80 cm beneath the surface remains of the Arpadian building came to light. Beneath the Arpadian wall, sidewall of a Roman building was found as well. It seems that during the building of the Arpadian house, the sidewall of the Roman building was broken off. 20 cm beneath the topsoil a round pit was also unearthed.

In *trench Nr 2* ruins of the Roman wall, a surface covered with stones were found. In the trench the fortification wall, and a sidewall of a Roman building was found. The Roman building was built on the foundation of the fortification wall, so it was built in a later period than the wall.

In *trench 17* the round wall of a U-shape tower came to light. On its outer side, a ditch was found which was filled with earth. In *Trench Nr. 18* a sidewall of the

previously mentioned U-shaped tower was traced. Furthermore, inside the tower, 60 cm beneath the topsoil, the trampled surface, a burnt and stamped floor came to light.

In *trench Nr 22* two different trampled surfaces were recorded. The upper one was ruined, but the lower remained in a good condition. The lower surface was laid 50 cm beneath the topsoil. On that surface a kiln, was found. The floor of the kiln was built of stones. Two oval shallow pits were used as fire place. Furthermore three postholes were found beside the u-shaped tower. The wall of the inner building was made with *opus incertum* walling technique. The entrance of the tower was not walled off. In *trench Nr 19* further postholes were found. In the doorway of the tower foundation or doorstep was not recorded.

In *trench Nr 20* the outer wall of the Arpadian building came to light. On its inner side 65 cm beneath the topsoil a round piece of iron slag was found /78.47.31/ and fragments of a pot were also unearthed. Beneath the yellow clayey layer, a thick grayish devastation layer was found from which smaller pits, postholes were dug out.

In *trench Nr 23* the ditch came to light, which was dug out from the roman surface. A round shaped pit cut this ditch. The Arpadian house was built on the corner of the Roman building. Here the Roman wall was broken down until the depth of 90 cm. Furthermore the outer side of the Arpadian house was built on the entrance of the Roman building. In the trench more postholes and pits were found.

In *trench Nr 33* 30 cm beneath the topsoil the Arpadian age yellow clayey fill came to light, which is 20-40 cm thick. At 80 cm beneath the topsoil, the Roman house was unearthed. Furthermore in the northeastern side of the trench the corner of a pit-house was uncovered.

In *trench Nr 34* the inner partition of the Arpadian house came to light. Beneath the Arpadian building the other side of the pit-house was found with its oven. The oven laid beneath the Arpadian wall, at 175 cm from the present surface.

In *trench Nr 36* postholes and a ditch was found. On the outer side of the Arpadian house a posthole, packed with stones was recorded. The post was square shaped. From the Arpadian surface/which is the yellow clayey layer/ two pits/?/ was unearthed.

In *trench Nr 37* two postholes were found, which was placed in parallel with the Arpadian building. Both were dug out from the yellow layer. On the northern side of the trench under the yellow layer a Roman pit-house came to light. On its southwestern

corner an oven was recovered, while on the southeastern one, a pit. In the middle, just beside the southern side of the wall, two postholes were found.

In *trenches 40-32* a kiln built of stone, a foundation ditch and postholes were found. The ditch lies under the Arpadian building. The kiln was located at the corner of a square shaped building which were broken down, only its foundation ditch has been found. Two postholes were unearthed at the western side of the house.

In *trench 28* a square shaped Roman pit-house was found, which laid under the Arpadian stone building. Furthermore a narrow trench was found which was parallel with the Roman wall. The trench was cut by the Roman pit-house. In *trenches Nr 27 and 30* the fortification wall was found 5-10 cm beneath the topsoil. As well as in *trench 25*, where, furthermore the ditch, parallel to the fortification wall was also found.

In *trench Nr 31* the narrow ditch running parallel to the fortification wall was also found. Furthermore postholes and a pit with burnt layer were unearthed. The pit has a square shaped fire-place on top beneath of which the pit was filled with earth mixed with Roman material.

There is not any available description of *trench 29*. According to the site plan a grinding stone, and two round pits/?/ was unearthed at the trench.

In *trench 44* /as well as in *trench 62/* foundation ditches of the square shaped little building was found. It seems that the northern wall of the ditch is the thickest. In the same trench 5 pits were unearthed. Pit Nr 1 cuts the roman building, while pit Nr 2 lies under the Roman wall.

In *trench 62* ruins of the square shaped building was found. Furthermore a ditch came to light with stones in it. On the northern side of the trench, a pit with two smaller pits cutting into it, was found.

In *trench Nr 45* two kilns were found, without any artifacts. According to their shape and stratigraphical sequence, the excavators connected these features to the Roman period.

In *trench Nr 46* sidewall and entrance of a U-shaped tower came to light. Here the doorway was not walled off. Inside the tower a fireplace or a burnt surface was recorded.

In *trench 48* part of a wall foundation was found, which runs towards east from the sidewall of the roman building.

In *trench Nr 50* the roman wall was covered with 20-60 cm thick devastation layer.

In *trenches 59-60* a U-shaped tower was unearthed. Here the exact shape of the wall is questionable, because the inner part of the foundation is not rounded, but runs presumably straight.

In 1974 the northern part of the fortification was also investigated. *Trenches Nr 74-76* were aimed to monitor the inner part of the castle area. Household came to light in this area, 4 ovens, a fire-place pits were unearthed here. Exact chronological sequence is not yet known however some ordering can be made: I.e. pit Nr 5 was made earlier in time then a square shaped pithouse, excavated at trench nr. 76.

Excavations 1976-77

Trenches 103-104 was aimed to find the u-shaped tower located on the western wall. In *Trench Nr 103* the foundation of the tower came to light 30-70 cm beneath the topsoil. Only one row of stones remained from the Roman wall. In *Trench Nr 104* the foundation of the Roman wall laid 50-100 cm beneath the present surface. Here, the wall was taken down, only the last row remained. The foundation footing is 50/40 cm wide. The northern wall of the tower was also unearthed. Here, 45 cm beneath the surface a floor, made of brick was unearthed as well. In the same trench, the 90 cm wide entrance to the tower was found. Inside the fortification wall 40 cm beneath the surface a 100 cm thick devastation layer with bricks and roof tiles were found. The fortification wall remained 50 cm high. /79.21.1.-79.22.12/

In the western side of *trench 121* a modern wall of a building was unearthed. Under a 20 cm thick topsoil, the darkgrey Arpadian layer came to light. At the depth of 50 cm an oven was unearthed. From this depth a fragment of a cauldron /79.26.12/ and a saber cross-bar /79.26.72/ was found. Also an iron sickle /79.26.74/ was found in the same layer. On the next level, which can be dated to the late Roman period several pits whit postholes were dug out. Under the Arpadian kiln a pit and a posthole, was found. The material is late Roman, a special find is a fibula /79.26.154/ In some cases the stratigraphic sequence of the pits can be determined: The uppermost layer, that is the youngest the kiln. The posthole under the kiln cuts the pit, therefore the oldest is the pit. Pit Nr 1 was cut by posthole Nr 3.(whereas the previously mentioned fibula was found. Pit Nr was cut by a posthole, as well as pit Nr 5.

In *trench Nr 124* almost all the surface was covered with the collapsed Roman wall. After taking off the devastation layer 5 pits were came to light. The documentation does not describe the stratigraphic sequence or the depth of the pits, therefore it is problematic to determine the chronological order. At 50 cm from the surface a lozang headed arrow came to light. Also a Constantius Juv coin was found here /79.28.126/

In *trench Nr 127* a spolia, fragment of a column was found /???/ reused in the roman wall. 15 cm beneath the topsoil the Arpadian niveau was 55 cm thick. Under the Arpadian layer around 60 cm , a mortar layer came to light. The mortar was laid on a devastation layer as it was inside the western tower. Where the mortar layer ended a niveau with burnt surface came to light. On the burnt surface, stones were laid indicating the existence of a potshole. The same type of stone structure came to light in the northwestern corner of the trench. /79.29.1-79.29.6./

In *Trench 130* 15 beneath the surface remains of a kiln came to light. The kiln lies on the dark grey Arpadian niveau. From the cinder pit a stone awl came to light. On the western side of he trench, the western sidewall of a Roman building was unearthed. Also a stone of the porticus was found here.

In *Trench Nr 133* the fortification wall was found. On the southern part of the trench next to the outer side of the wall a round fireplace was found. (diameter 56 cm), made of stones lying in mortar. From the Arpadian layer a lozang-shaped arrowhead came to light/79.33.18/

In the southern part of *trench Nr 128* a mortar layer was found (the similar as it was in trench 127). On the northern part of the trench a yet unknown new posthole came to light. The posthole is 65*40 cm, with 18 cm diameter of the post. The layer covering the mortar is dark grey topsoil with Arpadian pottery. Under the mortar layer a new posthole was found /diameter: 60cm; the post's diameter is 16 cm./ The stratigraphic sequence shows, that the posthole was made earlier then became covered with mortar. /79.30.1-79.30.12/

In *trench Nr 129* the dark grey Arpadian layer is 30-40 cm thick. 60 cm beneath the Arpadian niveau, at the depth 100-110 cm a Roman building came to light with its entrance. From the same depth an iron sword /79.31.21/ was found. On the outer side of

the building on a narrow, oblong shaped surface made of roof-tiles was unearthed. On inner side of the building a burnt surface implies the existence of a fireplace.

In *Trench Nr 134* remains of an Arpadian aged house was found. 50-60 cm beneath the surface charcoal remains were found in a shape of a ridge-pole and a beam. The beams are rounded in shape. The layer of the wooden remains is 20 cm. Under this layer a reddish, burnt daub layer comes which is 30 cm thick. Under the level of the house between 80-120 cm a dark grey layer with mortar come to light, with early Arpadian ceramics /79.34.21-79.34.34./ From 120 cm the Roman layer came to light, which can be dated with a coin from II Constantius. /79.34.55./ The Roman surface is situated on the same depth.

In *trench 135* remains of three fireplaces were found. The first is located at the southwest corner of the trench whereas charcoal was found on a yellow clayey surface. Another oval shaped kiln was found in the middle of the western side of the trench. Furthermore a third fireplace came to light as well. The kiln's size is 235*100 cm, located 90 cm from the surface. In the kiln a large number of burnt acorn was found. The cinder pit of the kiln is oolong shaped. Under the kiln the Roman layer came to light. Remains of two pedestals were came to light here, one of the under the kiln. According to the stratigraphical sequence, the Roman building at least its porticus should be demolished by the time when the kiln was made. From the Roman devastation layer a Bronzring came to light./79.35.148./

In *trench 139* 40 cm beneath the surface the devastation layer of the fortification came to light. Around 40 cm remains of a kiln were found with its yellow clayey basis. That level was determined as the 1st floor level. From 40-75 devastation layer with burnt wattle and daub came to light. Furthermore at the depth 60 cm a spire /79.37.52/ was found. Under that layer a 2nd floor level was unearthed with a kiln. Beneath the Arpadian niveau the later Roman building came to light at 100 cm from the surface. In the southern end of the NW was (which is the sidewall of the Roman building) another wall part came to light, which is bad in quality and was built earlier than the Roman niveau.

In *trench 118* remains of three kilns and 7 pits were found. From 30 cm beneath the topsoil the Arpadian-age layer came to light. A kiln and 4 pits belong to this layer. The pits are located lower then the kiln because the layer inclines. 20 cm under the Arpadian kiln, two other kilns were found with Late Roman potteries. At the same depth a heart shape pendant was found /79.24.43/. Furthermore at the depth 115 cm a

thin yellow clayey layer with small pebbles were unearthed from which a pit was dug. 3 postholes were also deepened from the layer /79.24.1.-79.24.154/.

Figure 1

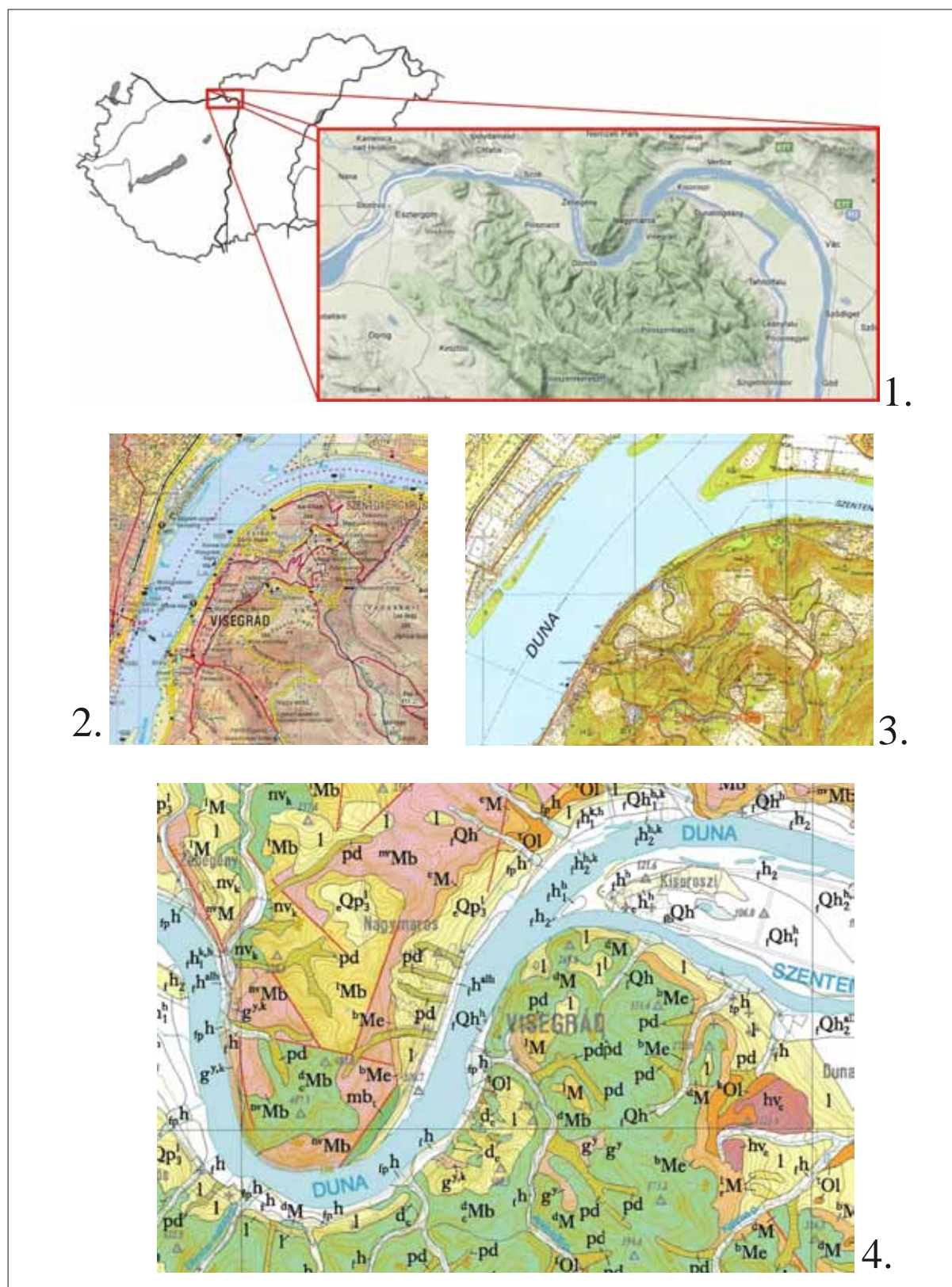


Fig.1.

1. Hungary and the Danube bend.

2. Location of Visegrád - Tourist map. *Pilis Visegrádi-hegység 1: 40000* (Budapest: Cartographia, n.d.)

3. Location of Visegrád - Detail from Topographic map

4. Geological map of the area. *Magyarország földtani térképe 1:100 000* (Geological Map of Hungary) eds. Tamás Budai, Péter Prakfalvi, László and, Ferenc Síkhegyi (Budapest: MÁFI, 2000-2001)

Figure 2

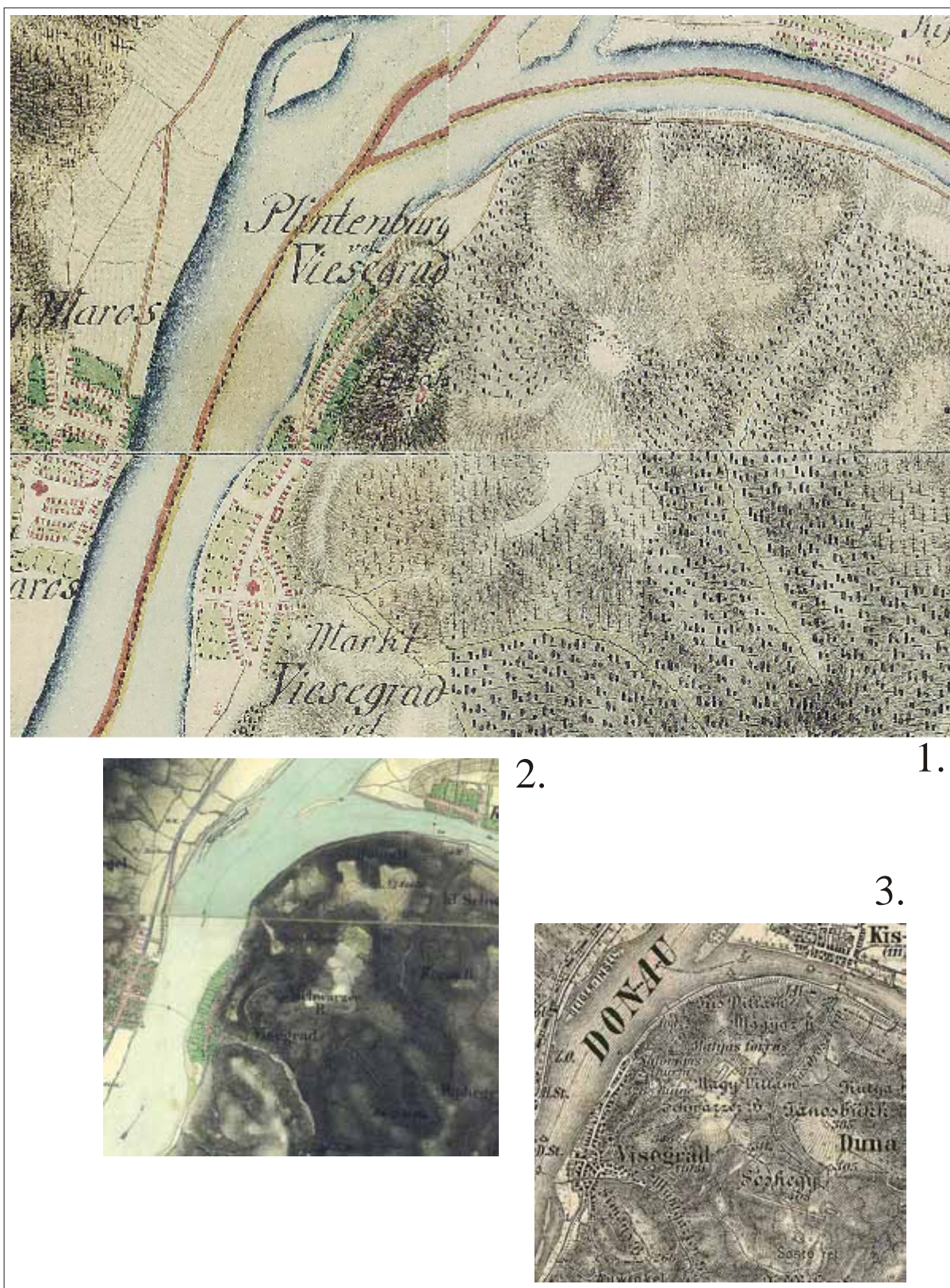


Fig.2.

1. *Az első katonai felmérés* (First Military survey) (Budapest: Arcanum, 2004), Coll. XIV. Sectio XVII.

2. *Königreich Ungarn. The Second Military survey* (Budapest: Arcanum, 2006), Section 48 Colonne XXXII, Section 47 Colonne XXXII

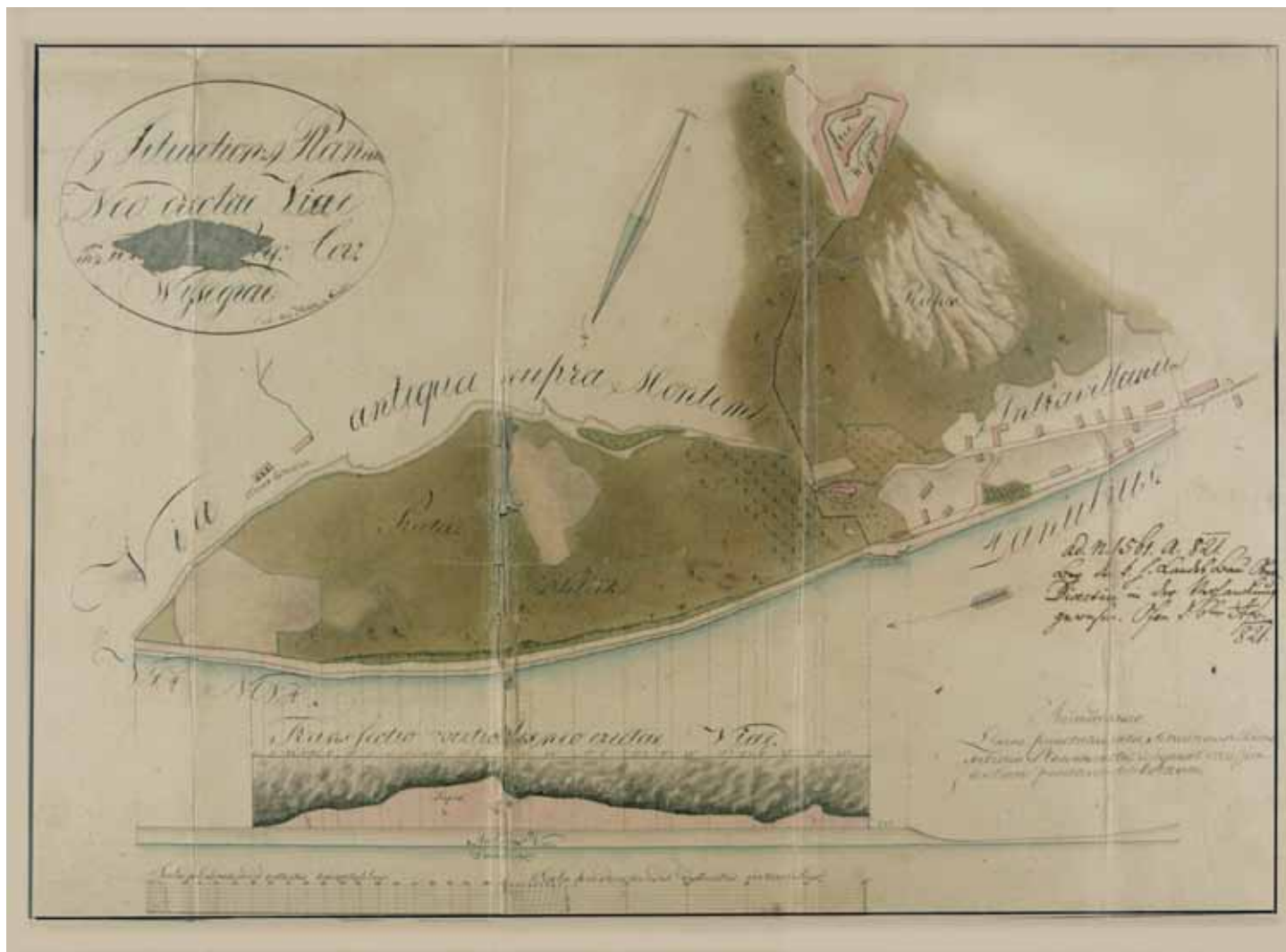
3. *Ungarn, Siebenbürgen, Kroatien-Slawonien. The Third Military Survey* (Budapest: Arcanum, 2007), Zone 14 Col XX



1.

Fig.3.

1.National Archives of Hungary. S 11 No 0207. *Visegrad dominii*. [Michael Karpe – Regio Cameralis ordinarius]. n.d.

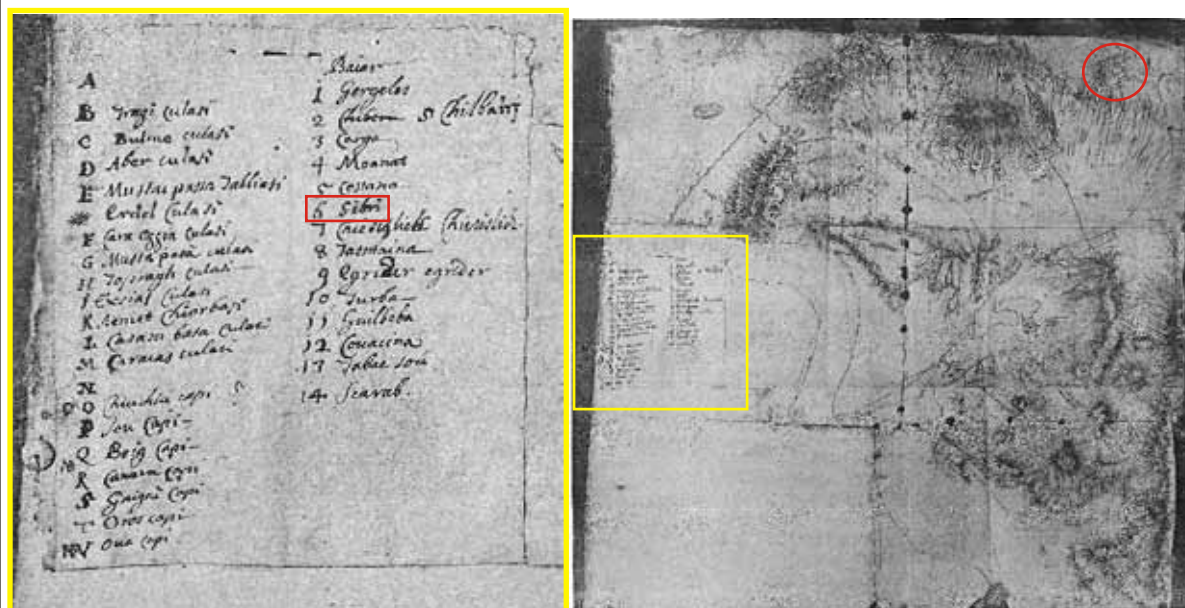


1.

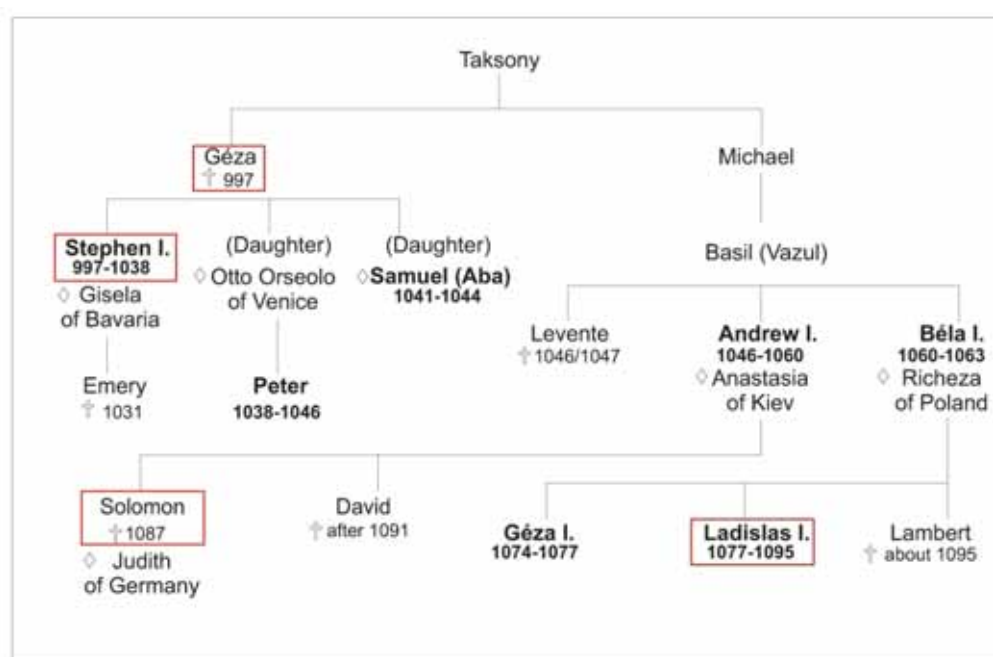
Fig.5.

1.National Archives of Hungary. S12 DIV XIII No496. *Situationis Planum neo erectae Viae ... Wysegrad* [Michael Asboth – Jur. Geom.]. 1821.

Figure 6



1.

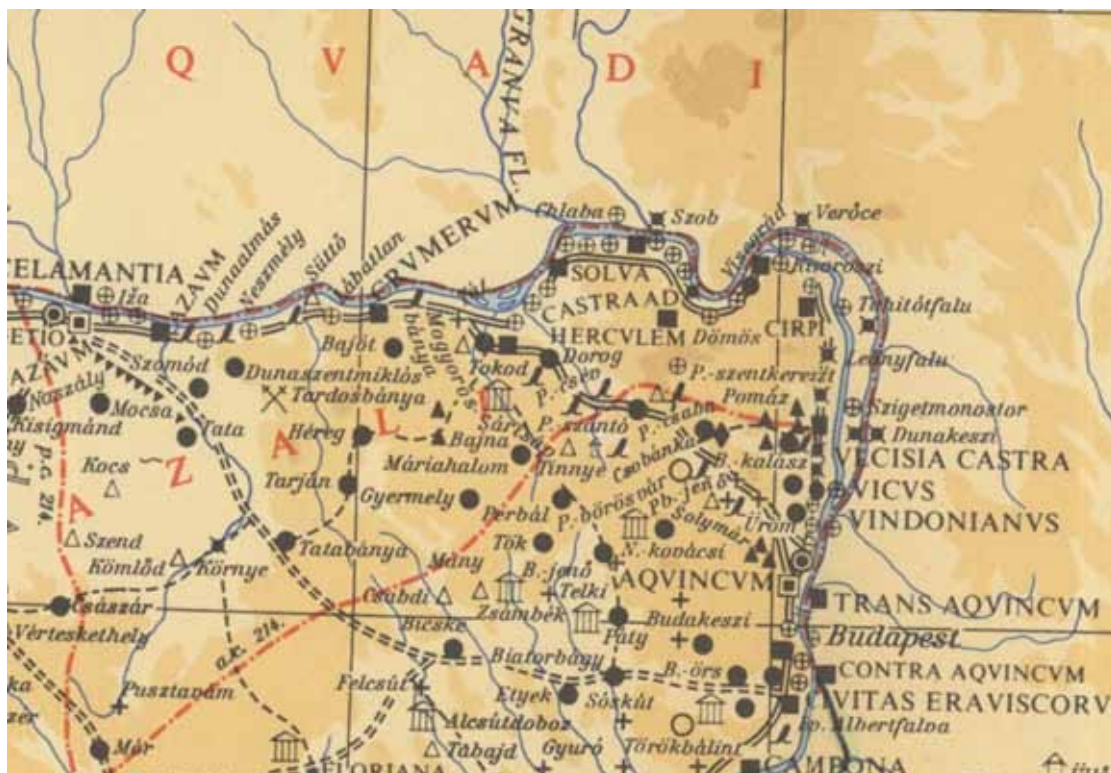


2.

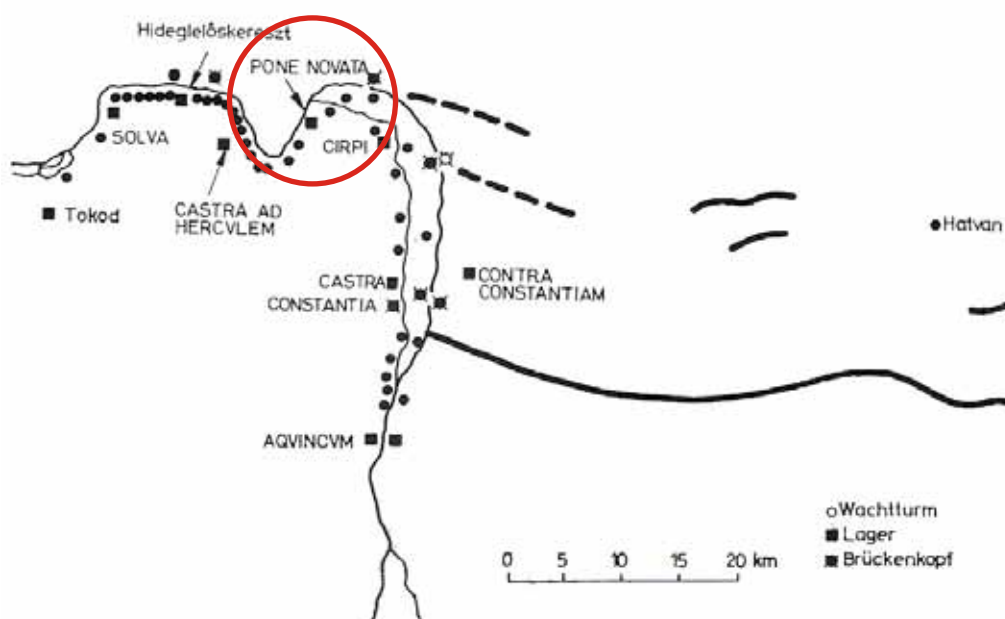
Fig.6.

1. The term 'Sibri' on Marsigli's map. Dr. Veress Endre, "Gróf Marsigli Alajos Ferdinánd olasz had mérnök jelentése és térképei Budavár 1684-1686-iki ostromairól, visszafoglalásáról és helyszínrajzáról" (Reports and maps on the 1648-686 year siege of Buda castle, by Count A.F Marsigli, Italian soldier), *Budapest Régiségei* 9 (1906)
2. The Arpadian dynasty 10-11th century

Figure 7



1.



2.

Fig.7.

1.Topography of Roman remains in the Danube bend on Tabula Imperii Romani L34, Soproni Sándor ed.

Tabula Imperii Romani. Aquincum-Sarmizegetusa-Sirmium. Auf Grunde der Weltkarte 1: 1000000 (Budapest: Akadémiai Kiadó) 1968.

2.Roman military sites in the Danube bend Soproni Sándor, *Die Spätromische Limes zwischen Esztergom und Szentendre* (Budapest: Akadémiai Kiadó, 1978), Fig 92/1

Figure 8

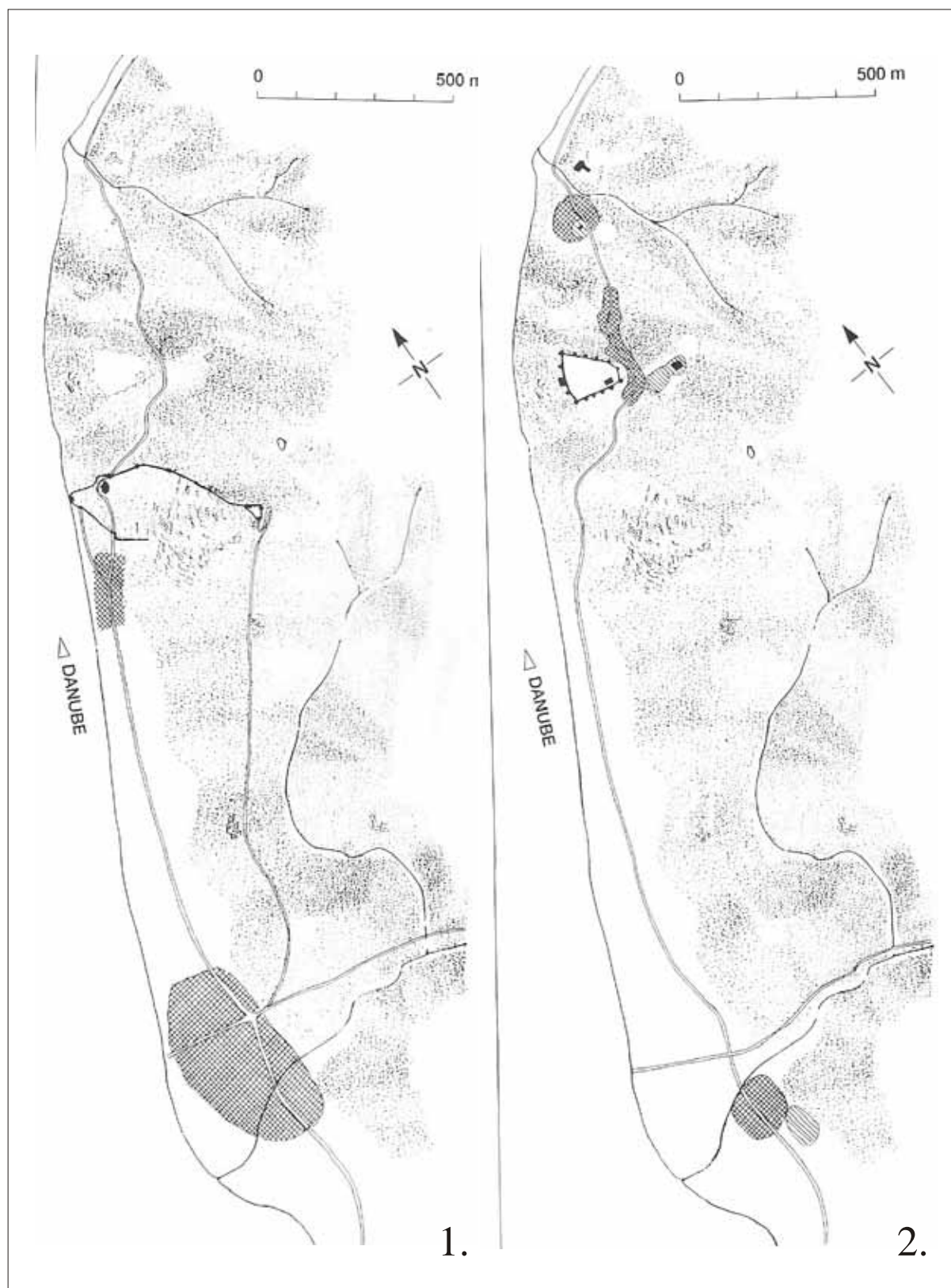


Fig.8.

1. The 11th century topography of Visegrád. *Medieval Visegrád*. Ed József Laszlovszky. Diss.Pann III. 4. (Budapest: ELTE, 1995), Fig 2.
2. The 13th century topography of Visegrád. *Medieval Visegrád*. Ed József Laszlovszky. Diss.Pann III. 4. (Budapest: ELTE, 1995), Fig 3

Figure 9

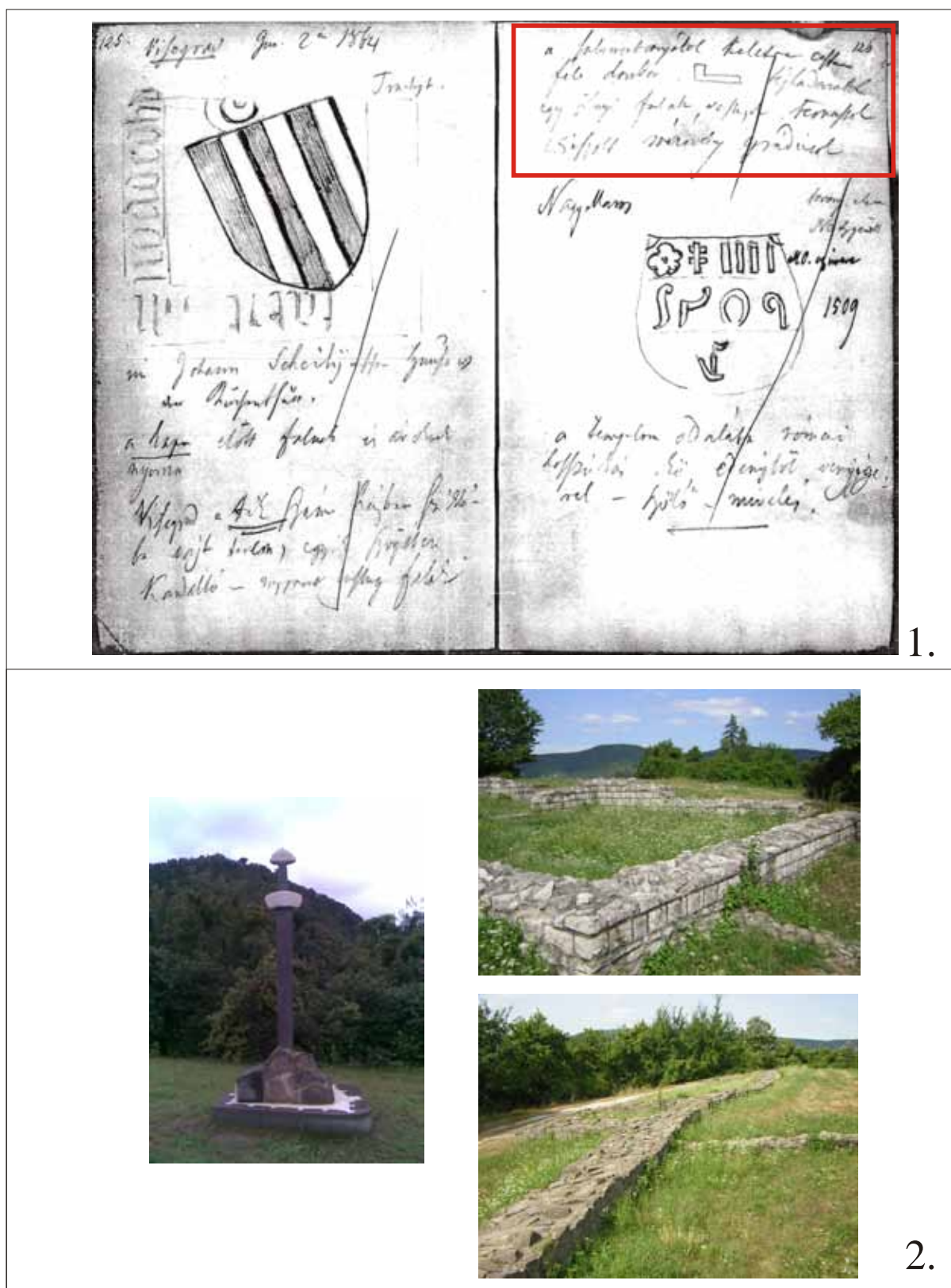


Fig.9.

1. The first report on Sibrik in Rómer's notebook. Rómer Flóris, *Reports*, Library of the National Office of Cultural Heritage, 19414 KK, XIII, 126.
2. Sibrik at present

Figure 10

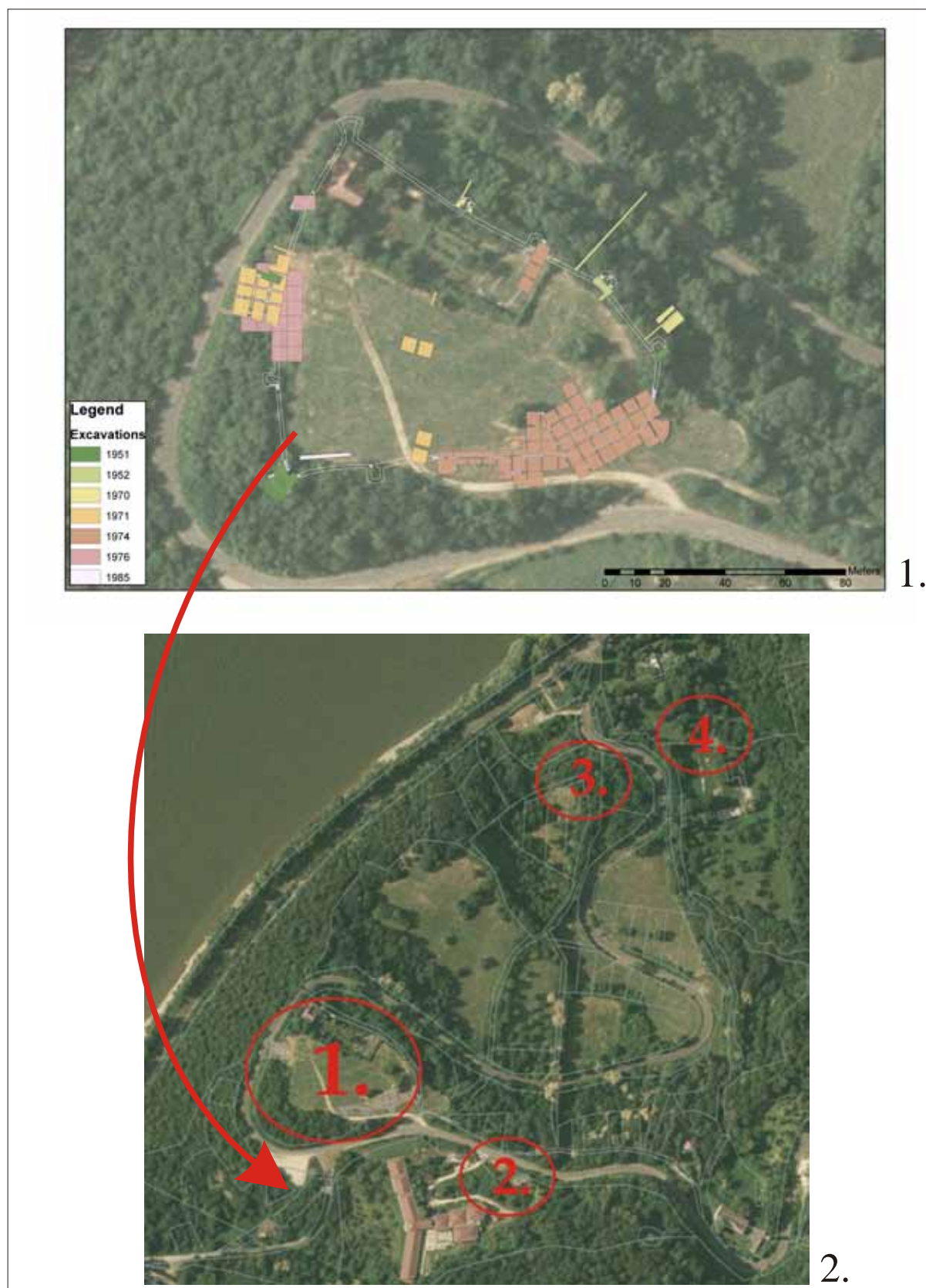


Fig.10.

1.Excavations on Sibrik hill 1951-1985

2.Discoveries around the castle 1: Bailif's castle, 2: Archideaconal church and cemeteries, 3: Várkert settlement, 4: St Andrews monastery

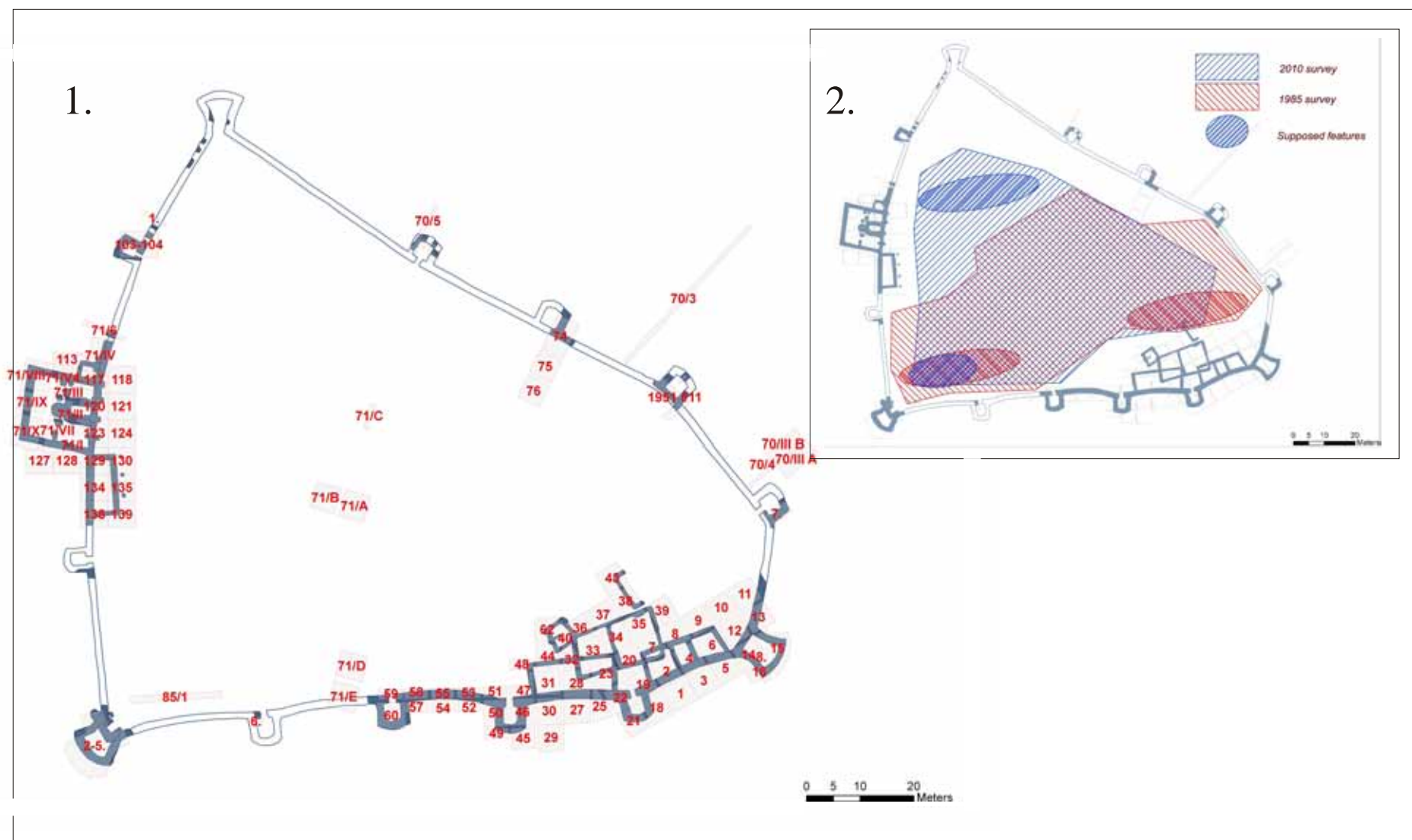


Fig.11.
 1.Basemap with numbered trenches
 2.Geophysical surveys (1985, 2010)

Figure 12



1.



2.



3.

Fig.12.

- 1.Aerial photos taken from hot air balloon
- 2.Stereophotos of trenches
- 3.a-b. Orthophoto of excavated trenches

Figure 13



Fig.13.
 1.Results of land surveying (2007)
 2.a-d. 3D models of the hill, with historic maps

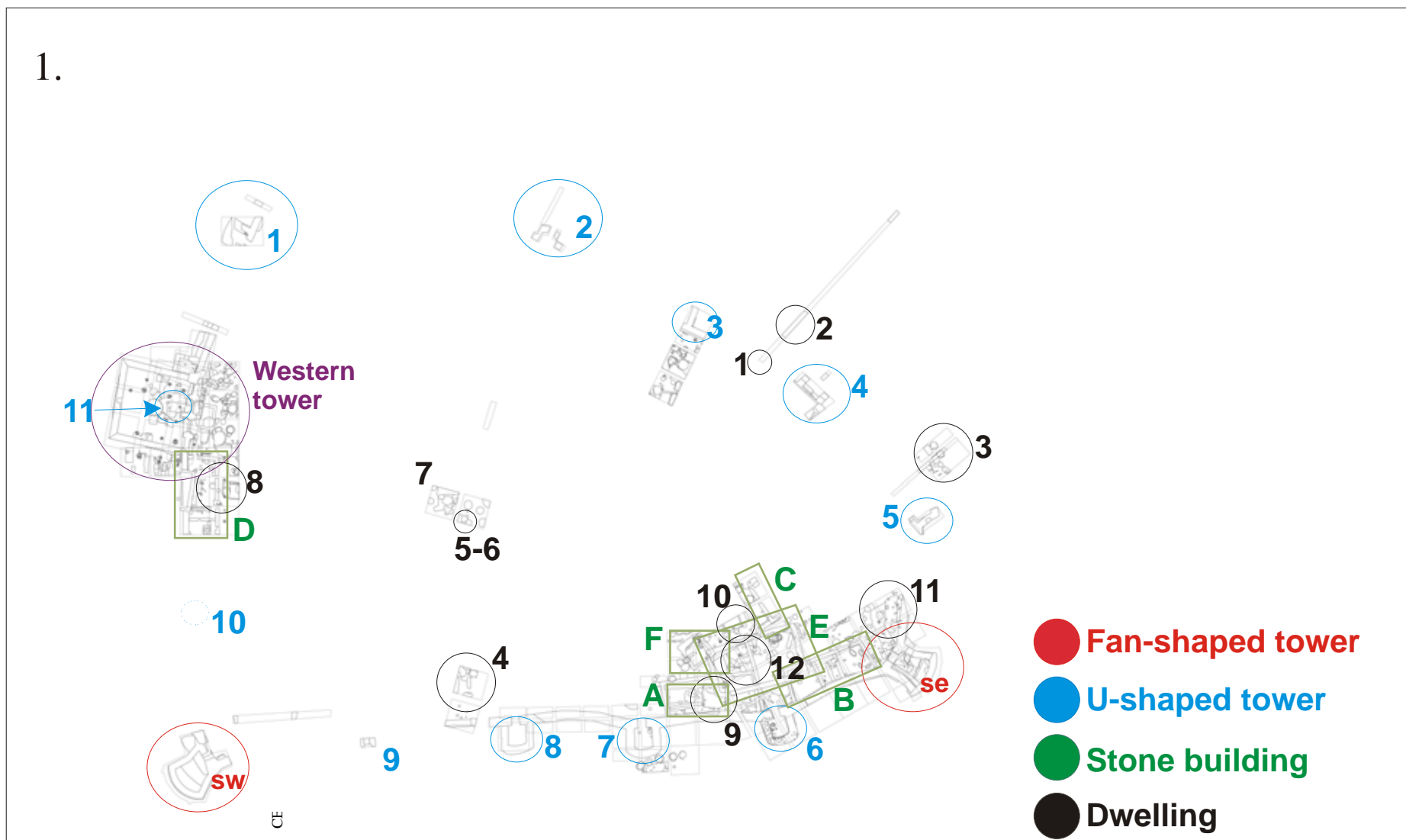


Fig.14.

1.Main archaeological features of Sibrik hill

Figure 15

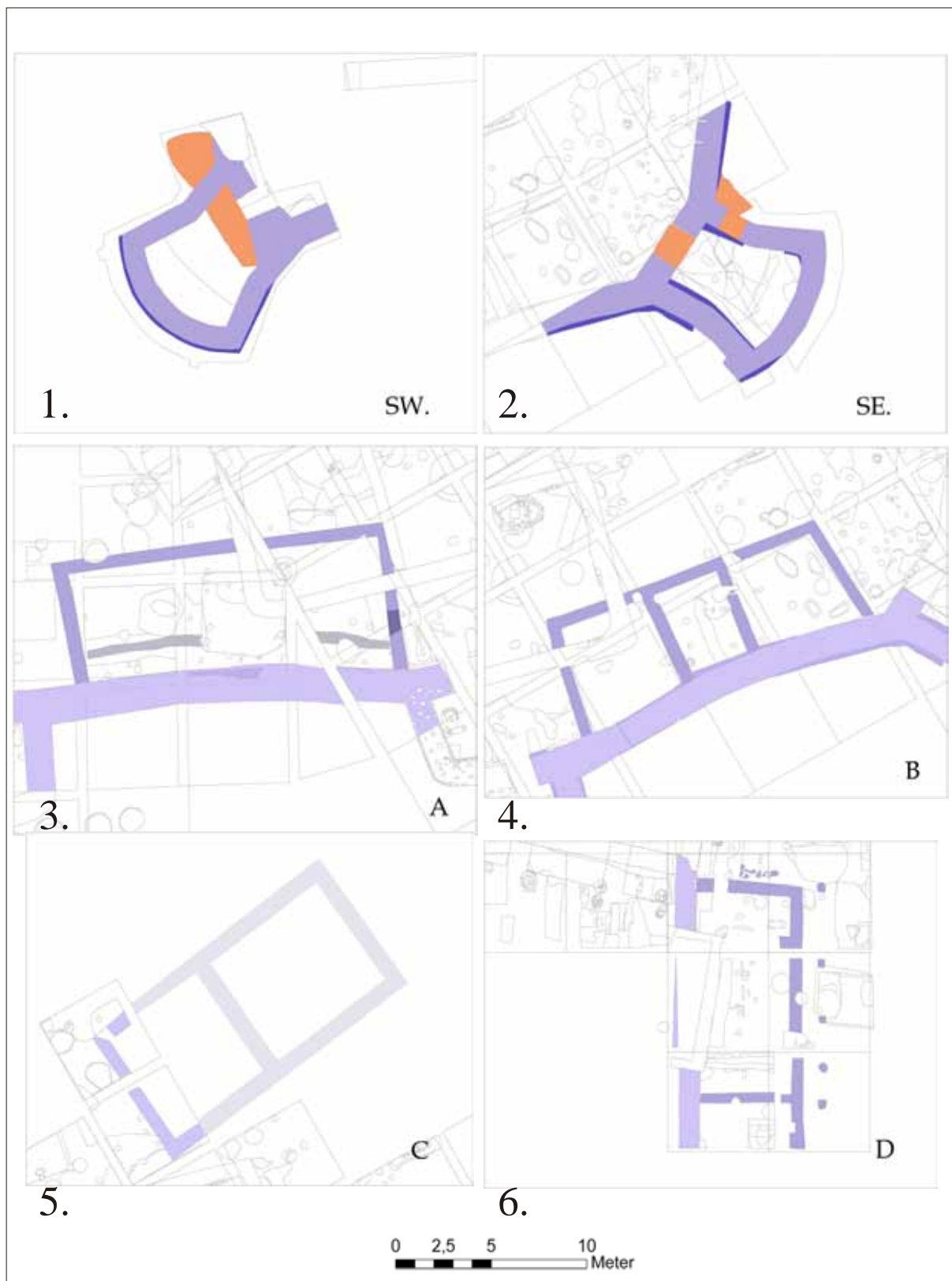
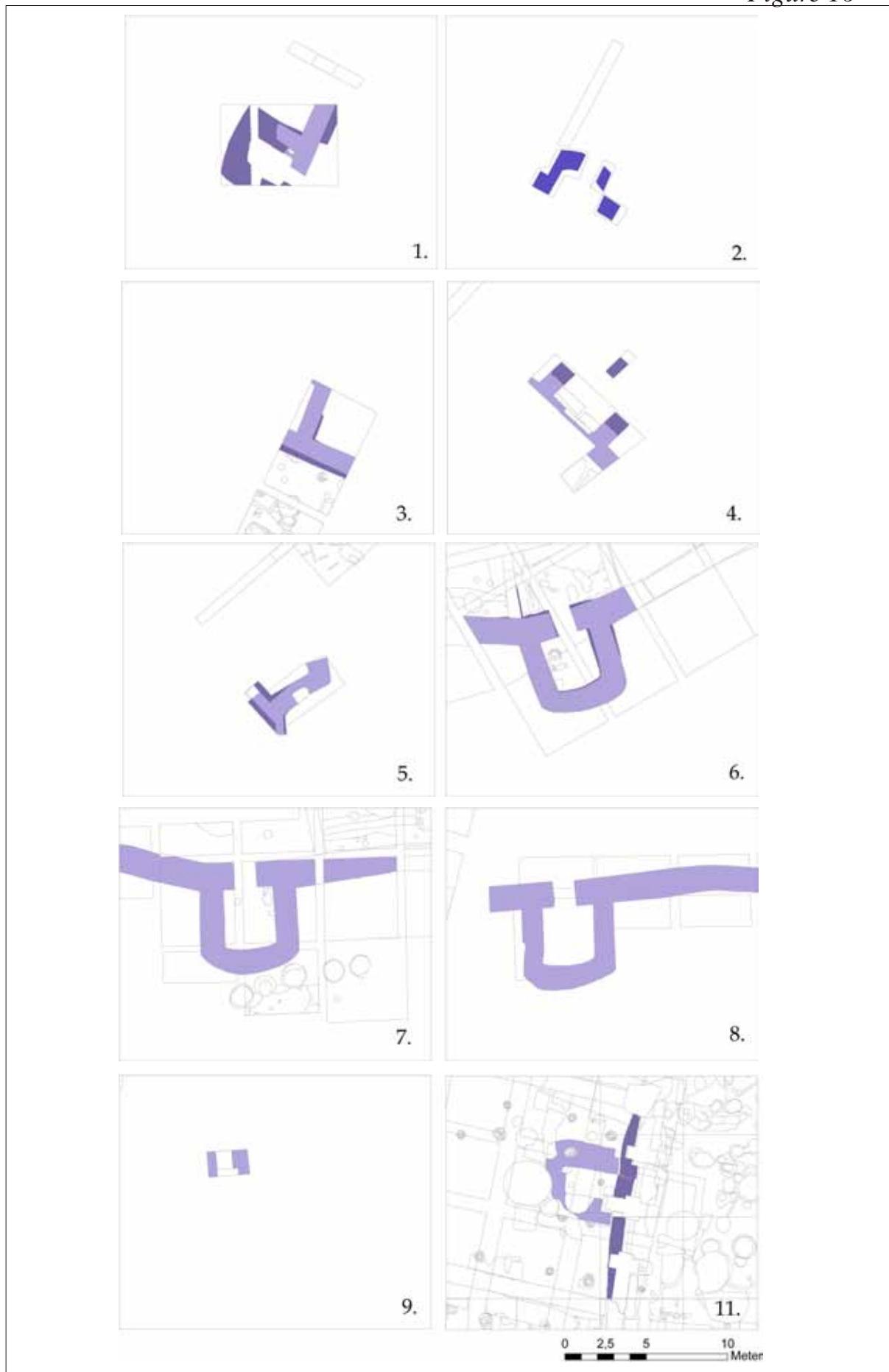


Fig.15.
1.-2. Fan-shaped towers
3.-6. Stone buildings A-D

Figure 16

**Fig.16.**

1.-10. U-shaped towers No. 1-9; No. 11.

Figure 17



Fig.17.
1.-2. Stone building E-F
3.-8. Pit-houses No.3-9.

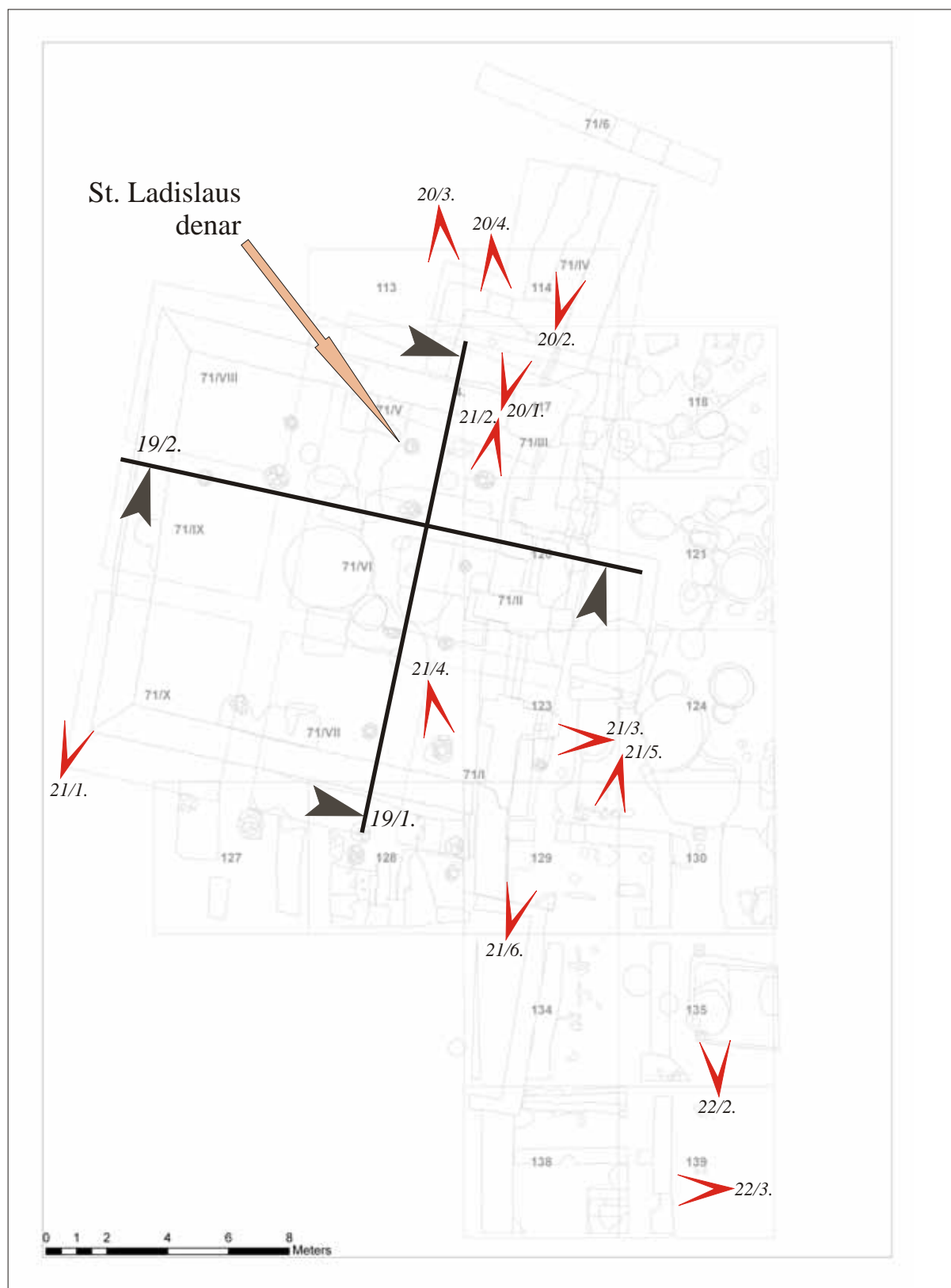


Fig.18.

Features of the Western tower

➤ Direction of the photos (see Fig. 20-22)

➤ Section drawings (see Fig. 19)

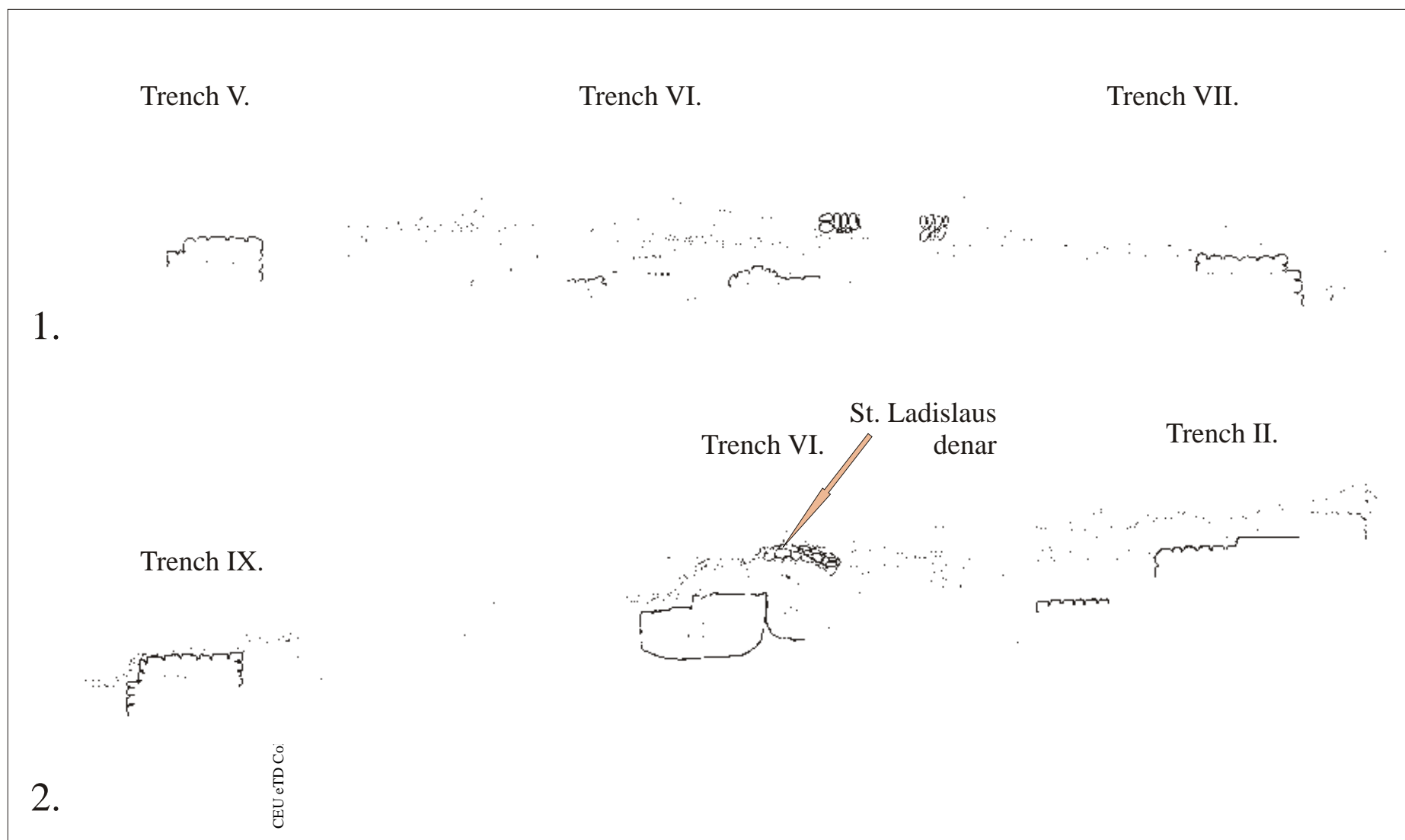


Fig.19.

1.-2. Section drawings of the Western tower

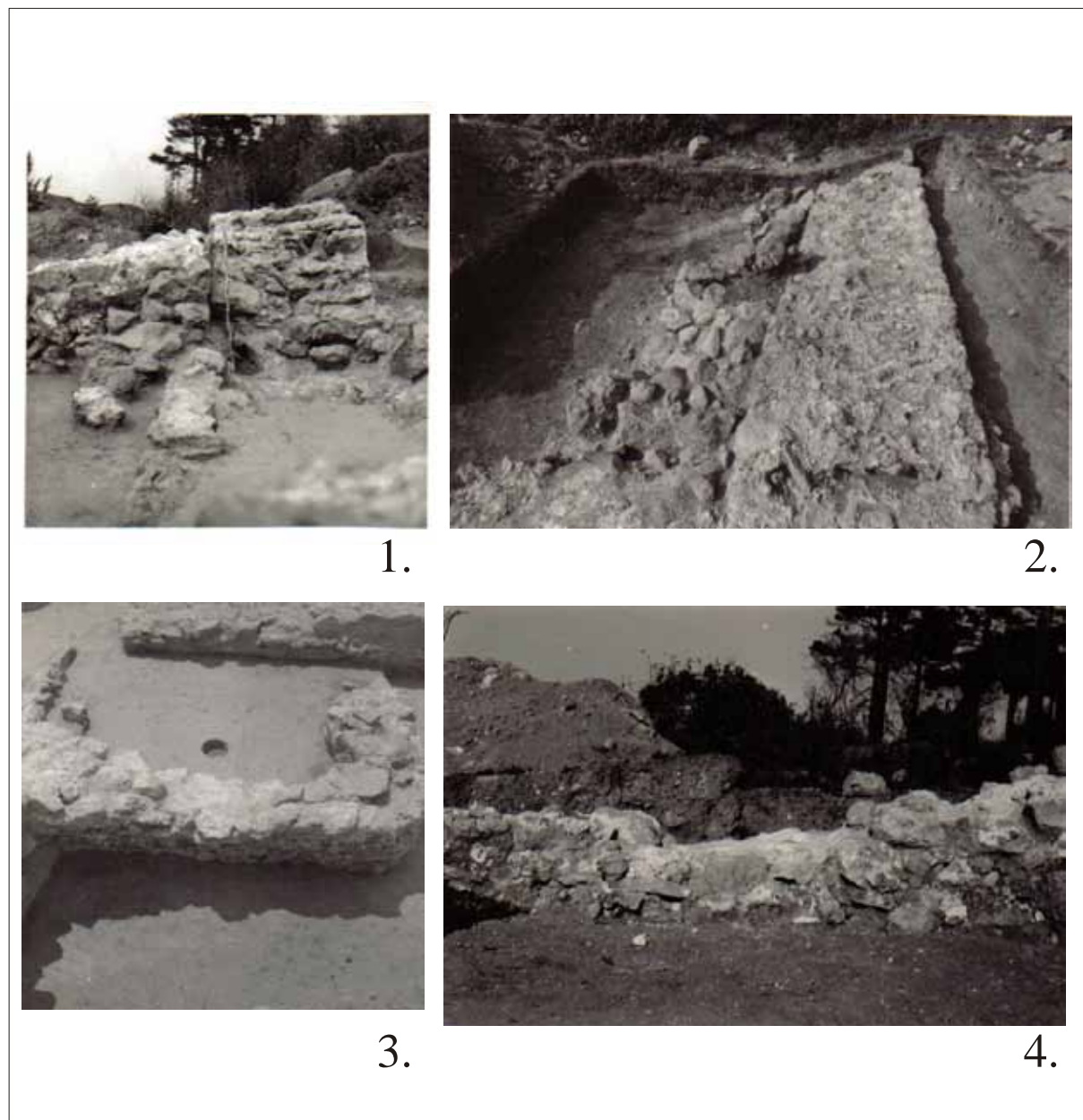


Fig.20.

- 1.-2.The western fortificaion wall with the strenghtening
- 3.Side-tower
- 4.Entrance of the side-tower



1.



2.



3.



4.



5.



6.

Fig.21.

- 1.Wall of the Western tower with a stone-padded posthole
- 2.Foundation of tower No 11.
- 3.Wing-shaped gate of the Western tower
- 4.Stone-padded posthole
- 5.Building D
- 6.Building D



1.



2.



3.



4.

Fig.22.

- 1.Footing of a pillar of the porticusin Building D
- 2.The kiln of dwelling No. 8
- 3.Trenches with section walls
- 4.The hill from South

Figure 23

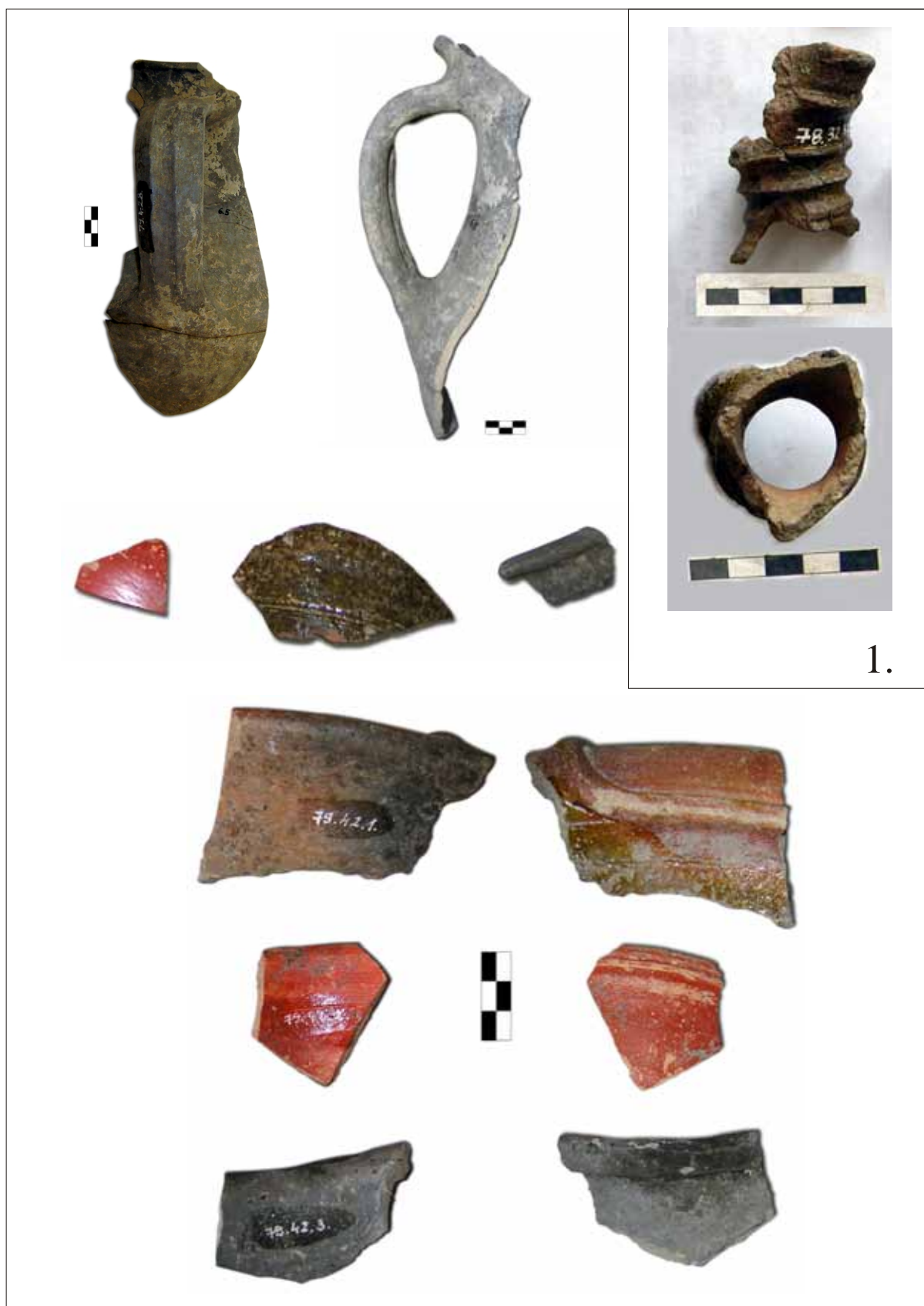


Fig.23.
 Ceramics from the Late Roman period
 1. Glazed lamp - 78.32.74

Figure 24



1.



2.



3.



4.



5.

Fig.24.

- 1.Marble plate - 61.1.4.1
- 2.Fibula - 79.3.94
- 3.Fibula - 79.7.79
- 4.Cingulum - 78.46.29
- 5.Bronze plate - 79.35.148.

Figure 25



Fig.25.

- 1.Ludus Latrunculorum - 78.50.107
- 2.Glass vessel - 78.36.81
- 3.Bronze ring - 79.35.148
- 4.Belt fitting - 78.14.79

Figure 26

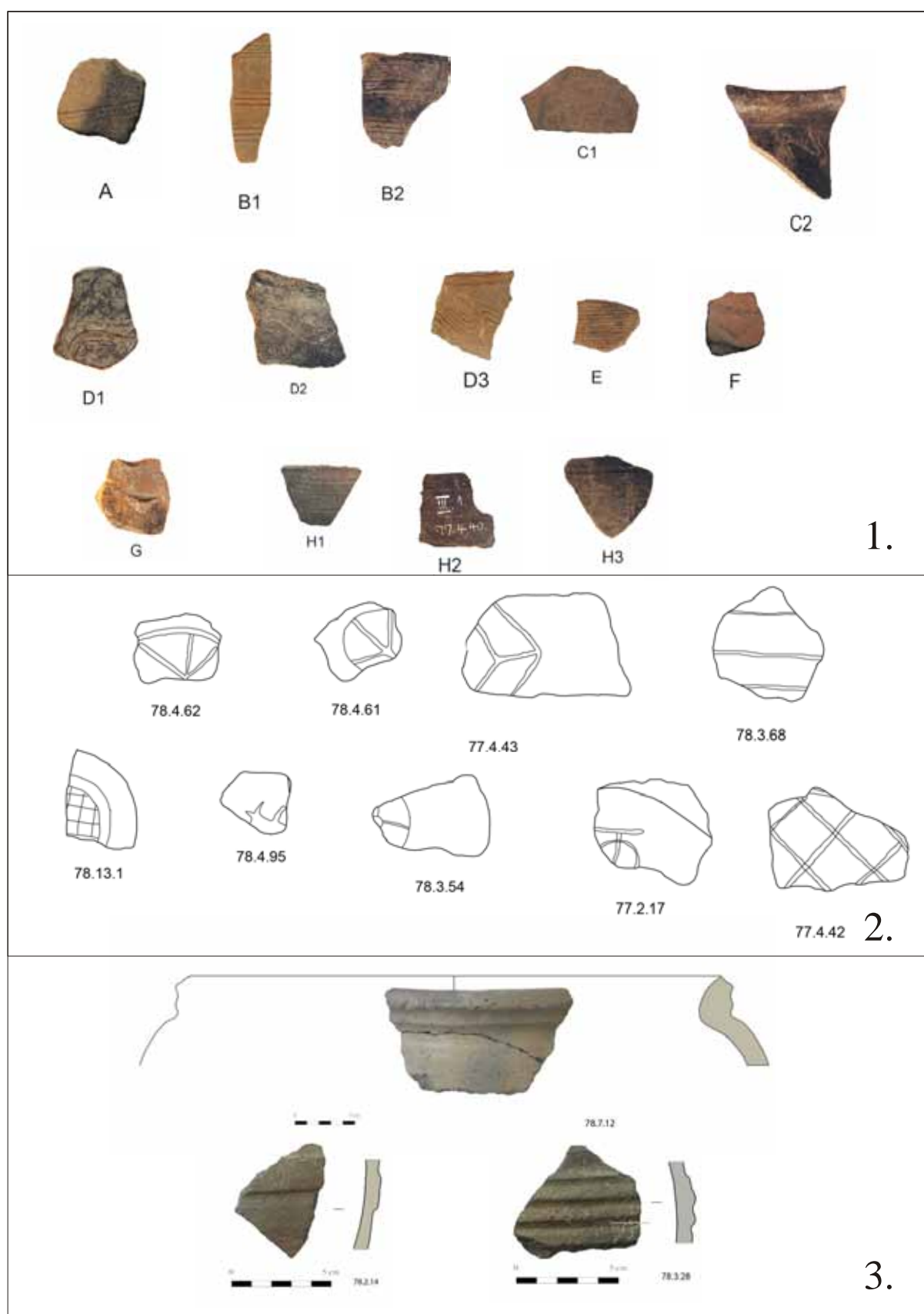


Fig.26.
 Arpadian age pottery
 1.Decoration styles
 2.Pottery marks
 3.Pottery with graphite

Figure 27

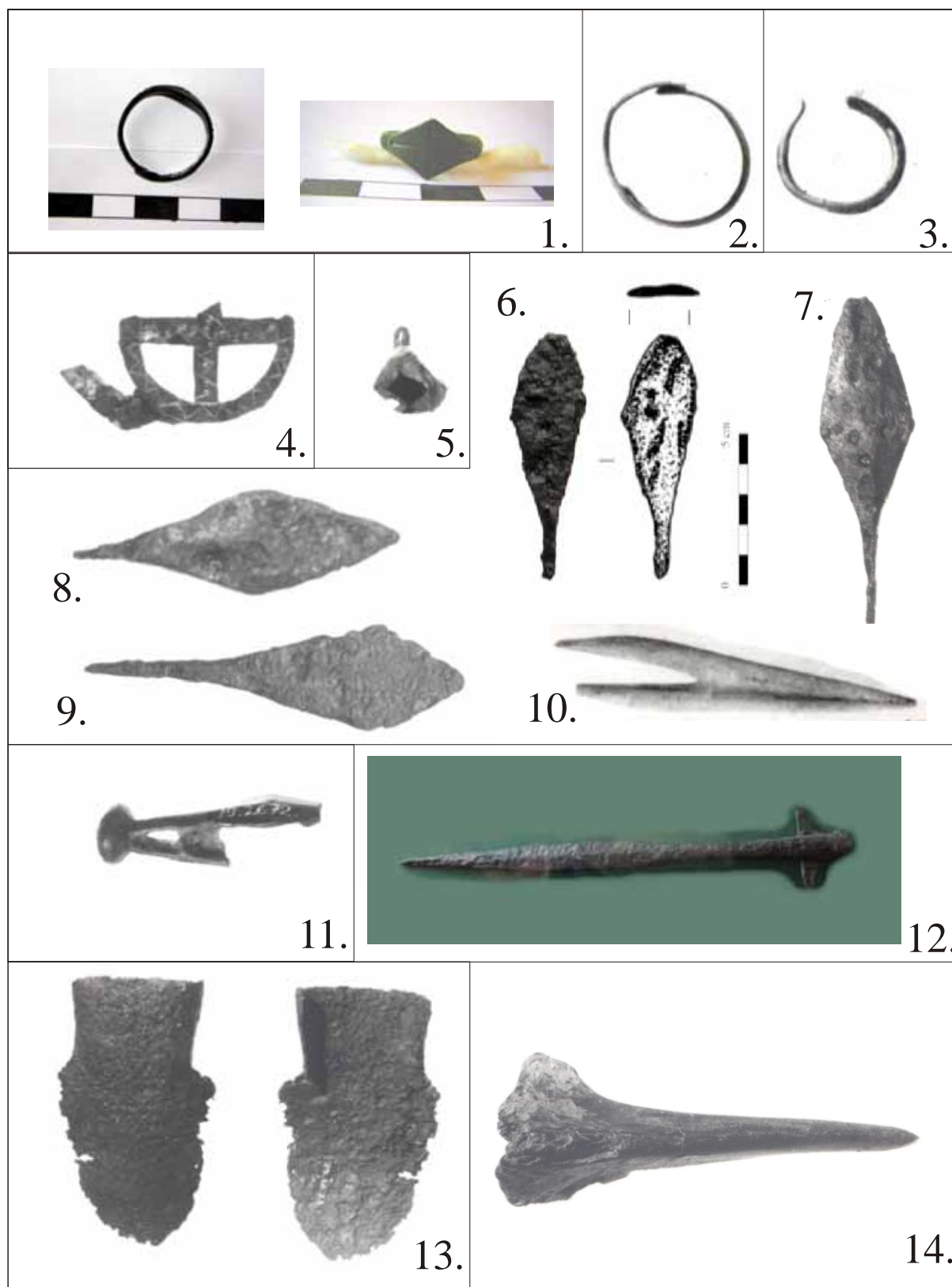


Fig.27.

Characteristic finds from the Arpadian age

1-2.Rings - 78.14.80; 78.15.123; 3.Lockring - 78.14.81

4.Mount - 78.17.82; 5.Pendant - 78.18.24

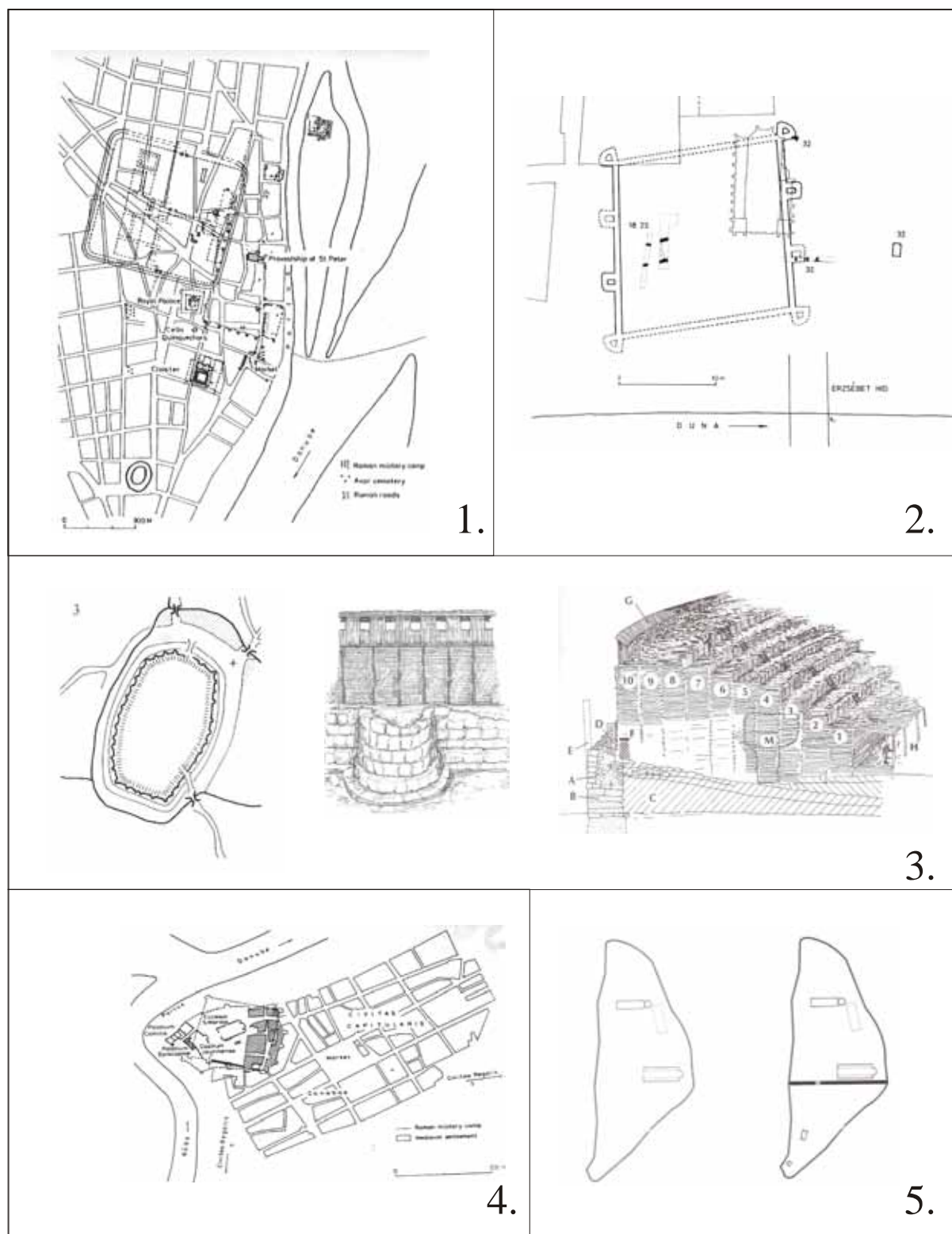
6.-10. Arrowheads - 78.4.79; 79.28.28; 79.33.18; 80.16.2; 78.54.60

11.Quillon - 79.26.72

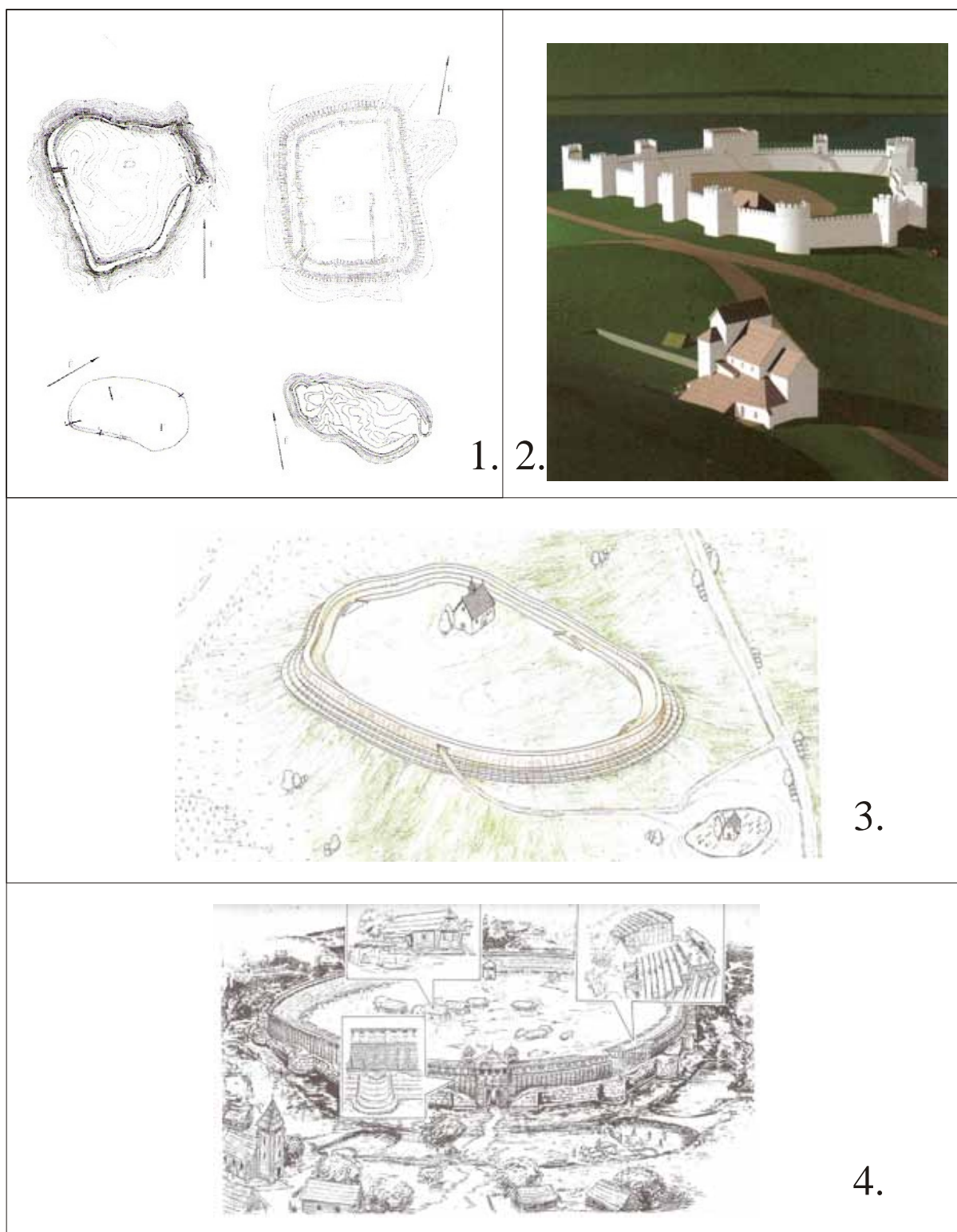
12.Bronze spare - 79.37.52

13.Spade head - 79.26.73

14.Awl - 80.26.1

**Fig.28.**

1. Óbuda. Bóna István, *Az Árpádok korai várai* (Early castles of the Arpadians.) (Debrecen: Ethnica, 1998), Fig 92.
2. Pest. Írásné Melis Katalin, *Adatok a pesti-síkság Árpád-kori településtörténetéhez* (Data on Arpadian settlement system of Pest) (Budapest: Budapesti Történeti Múzeum, 1983), Fig. 9.
3. Sopron a: Buzás Gergely, "11. századi ispáni várainkról" (On Eleventh century bailiff's castles) in Gyöngyi Kovács and Zsuzsa Miklós eds. *"Gondolják, látják az várnak nagy voltát - Burgenkundliche Studien zum 80. Geburtstag von Gyula Nováki*, (Budapest: Castrum Bene Egyesület, 2006), Fig 4/3., b: Gömöri János, *Castrum Sopron. Sopron vára és környéke az Árpád-korban* Die Burg von Sopron (Ödenburg) in der Árpádenzeit (Sopron: Scarbantia Társaság, 2002), Fig. 22, Fig 44.
4. Győr Bóna István, *Az Árpádok korai várai* (Early castles of the Arpadians.) (Debrecen: Ethnica, 1998), Fig 12.
5. Esztergom Buzás Gergely, "Az esztergomi vár románkori és gótikus épületei" (Roman and gothic buildings in the castle of Esztergom) in *Az Esztergomi Vármúzeum kőtárának katalógusai* (Catalogues of the Castle Museum of Esztergom) Az Esztergomi Vármúzeum Füzetek 2. ed. Gergely Buzás and Gergely Tolnai, (Esztergom: 2004), 28.

**Fig.29.**

1. Early centres a: Abaújvár b: Bihar c: Torda d: Kolozsvár (Buzás Gergely, "On Eleventh century bailiff's castles," in Gyöngyi Kovács and Zsuzsa Miklós eds. "Gondolják, látják az várnak nagy voltát - Burgenkundliche Studien zum 80. Geburtstag von Gyula Nováki," (Budapest: Castrum Bene Egyesület, 2006), Fig. 4. 6-9.
2. Visegrád - Sibrik. Buzás Gergely, "Az 1000 éves Visegrád" (Millenium of Visegrád) *Várak, kastélyok, templomok*. 5/4 (2009) 4-7 7.
3. Borsod. Wolf Mária, "Earthen forts" in *Hungarian Archaeology at the Turn of the Millenium*, ed-in-chief Zsolt Visy (Budapest: Teleki László Foundation, 2003), 328-332., Fig. 15.
4. Sopron Gömőri János, *Castrum Sopron. Sopron vára és környéke az Árpád-korban*. *Die Burg von Sopron (Ödenburg) in der Árpádenzeit* (Sopron: Scarbantia Társaság, 2002), Fig. 50.

1.

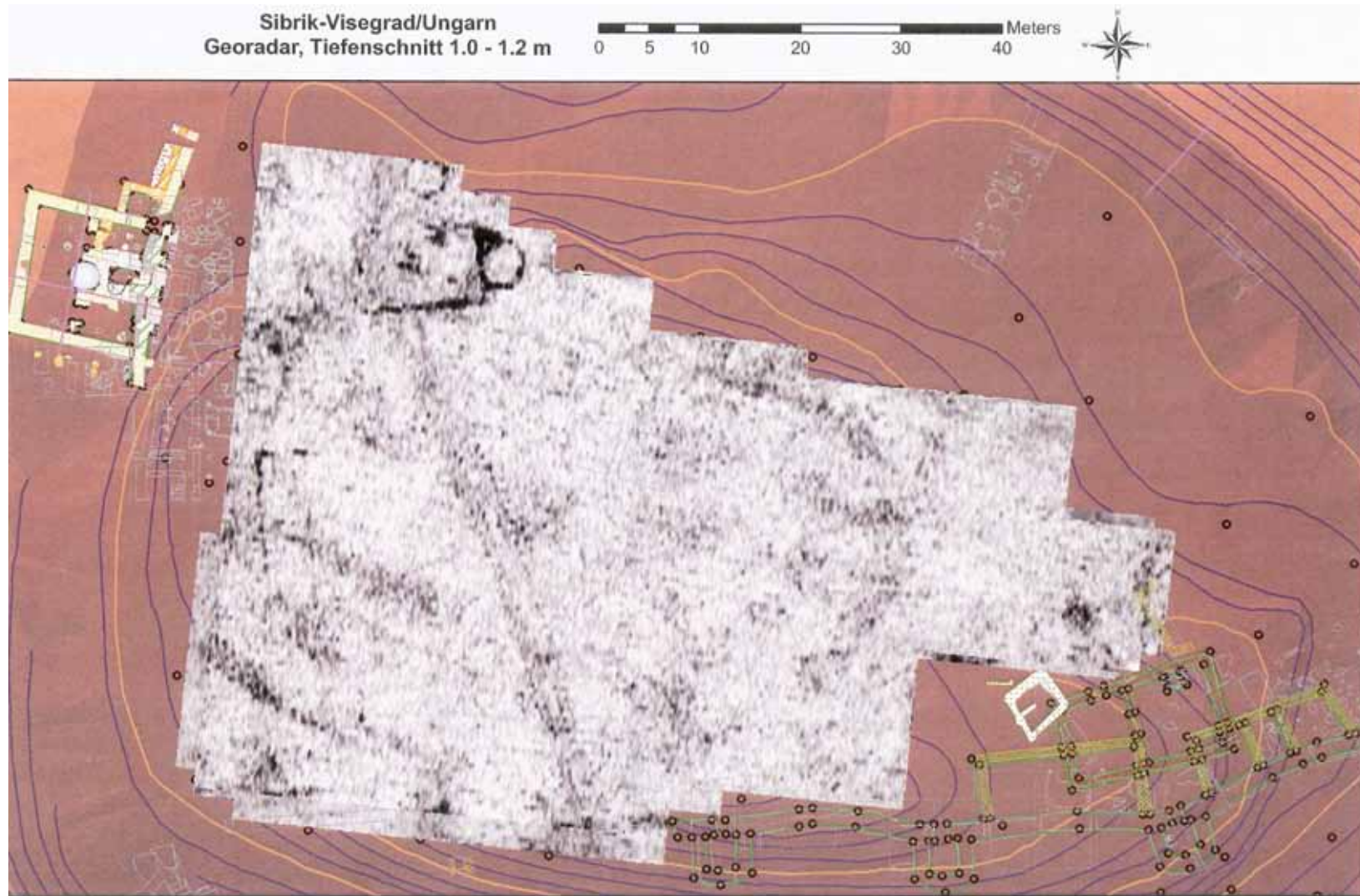


Fig.30.

1.Results of the geophysical survey 2010