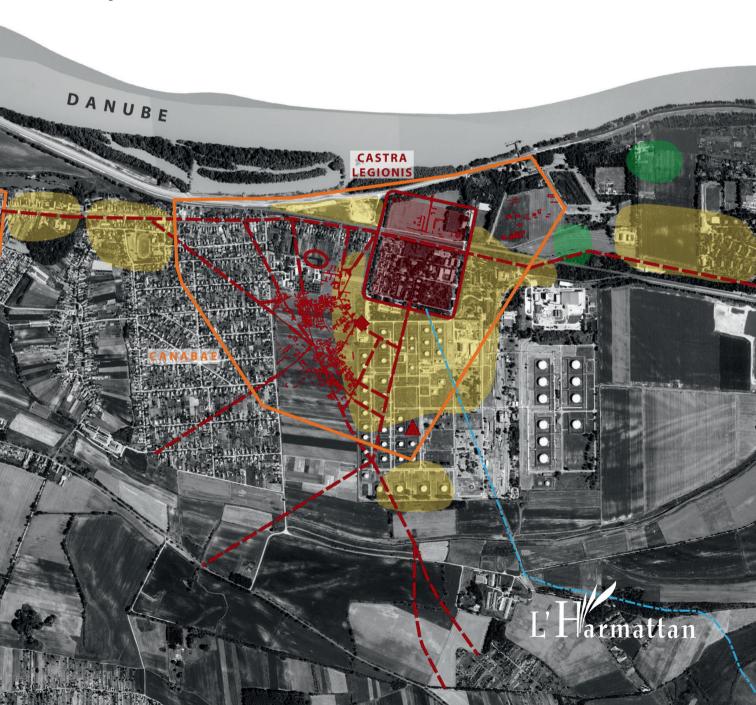
Celto - Gallo - Roman

Studies of the MTA-ELTE Research Group for Interdisciplinary Archaeology

edited by **László Borhy Kata Dévai Károly Tankó**



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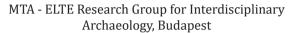
STUDIES OF THE MTA-ELTE RESEARCH GROUP FOR INTERDISCIPLINARY ARCHAEOLOGY

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László Borhy Kata Dévai Károly Tankó

Paris 2018







Institute of Archaeological Sciences ELTE - Eötvös Loránd Unversity, Budapest

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On the cover:

The topography of Brigetio (Map by László Rupnik).
Golden *aureus* of Vespasian (Photo by Dávid Bartus).
The circular trench of the Civil Town of Brigetio (Photo by Kata Dévai).
The trench system in the territory of the Civil Town of Brigetio (Photo by Kata Dévai).
Terrazzo-floor and hypocaustum of a building in the *canabae* (Photo by Dávid Bartus).

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PREFACE

The MTA - ELTE Research Group for Interdisciplinary Archaeology, which was established in 1999, launched and undertook several archaeological excavations and investigations under the supervision of research group leader Miklós Szabó, member of the Hungarian Academy of Sciences. The results of these not only contributed to the discipline of archaeology at national and international levels, but they were also directly employed in higher education, in the field of teaching archaeology. The studies found in the present volume closely reflect what the name of the research group conveys: it includes the results of truly interdisciplinary and specifically archaeological investigations conducted by the members of the research group, who are researchers employed by the Hungarian Academy of Sciences (MTA) and faculty members of the Institute of Archaeological Sciences of the Eötvös Loránd University (ELTE). This volume mainly presents the scientific results of two major projects that have been running in France and Hungary for decades. One part of the book is related to ancient Bibracte (modern Mont Beuvray), where French-Hungarian investigations have been carried out since 1988. By uncovering the old forum and basilica, the Hungarian research team made a significant discovery concerning the urban planning of the entire Mediterranean region in the Late Republic and Early Imperial Period. The other part presents the results of multifarious investigations that have been conducted in the form of planned excavations, rescue excavations, and aerial archaeological investigations in the territories of the civil town, the legionary fortress, and the civilian settlement outside the fortress (canabae) of ancient Brigetio (modern Komárom/ Szőny) since 1992. The Gallo-Roman and Pannonian Roman regions are geographically linked by Povegliano, located in North Italy. Its Celtic cremation burials were uncovered and analysed by the members of the MTA - ELTE Research Group for Interdisciplinary Archaeology. Due to the process of Romanization, the Italian Celts and the Gauls became "Romans", that is members of the same huge cultural koine, which equally comprised Italy, Gaul and Pannonia. Accordingly, the study volume discusses the process of Romanization through "the eyes of the Romans." It describes the transformation from the aspect of the history of women's fashion attested by the analysis of representations and archaeological finds, and through the establishment of trade relations demonstrated by the analysis of thin-walled pottery that appeared in Pannonia during the settlement of the Italian population in the first century AD. Finally, the analysis of a Late Roman settlement located outside the Roman Empire, belonging to a Germanic people, called the Quadi, has also been included in this study volume. Although the Quadi were closely connected with the Romans for centuries, in times of both peace and war, they were not affected by the process of Romanization, unlike the Gauls, Celts, and Pannonian peoples.

As noted above, the results of investigations conducted by the MTA-ELTE Research Group for Interdisciplinary Archaeology have, in fact, been the most rapidly and directly employed in the field of higher education, the teaching of the upcoming generation of archaeologists. Since the beginnings, the supervisors of the research grup have put an emphasis on involving university students at graduate and postgraduate levels, as well as PhD students in the processing of the uncovered archaeological finds. With their BA and MA theses, and PhD dissertations, these students have achieved and produced impressive scientific results even in an international comparison.

I would like to express a particular gratitude to Miklós Szabó, the founder, and from 1999 to 2011 leader of the MTA-ELTE Research Group for Interdisciplinary Archaeology for the launch of the research programs, the cultivation and expansion of international scientific relations as well as collaborations, furthermore for the encouragement and support of talented young researchers. Finally, my thanks go to my colleagues, and to my former and current students for their outstanding performance in their work and achievements in the field of a wide range of research programs under my supervision since 2012. In the preparation and editing of this study volume I was assisted by Dr. Kata Dévai, research fellow, and Dr. Károly Tankó, senior research fellow, for whose painstaking work I am deeply thankful.

Budapest, summer 2018

László Borhy

corresponding member of the Hungarian Academy of Sciences rector of the ELTE–Eötvös Loránd University leader of the MTA–ELTE Research Group for Interdisciplinary Archaeology

Excavations in Brigetio (2012–2016)

Dávid Bartus – László Borhy – Nikoletta Sey – Emese Számadó

Archaeological excavations in Brigetio were concentrated in the civil town in the last 25 years, however, some new projects have been started recently on the topography of the legionary fortress and the military town. In the present paper, we would like to summarize the results of the excavations¹ of the last five years concerning all the three main settlement parts of Brigetio (Fig. 1).

1. CIVIL TOWN (SZŐNY-VÁSÁRTÉR)²

1.1 Roman cellars

In 2009 a cellar was unearthed at the site Szőny-Vásártér in almost perfect condition (Cellar 1),³ some metres to the west of a new cellar (Cellar 2), which was found in 2012 in sections L16–L17–M16–M17 (Fig. 2–5), measuring 4.4×2.6 metres. The walls of the cellar were

The excavations were conducted by the Department of Classical and Roman Archaeology, ELTE-Eötvös Loránd University and Klapka György Museum, Komárom under the overall direction of László Borhy (ELTE-Eötvös Loránd University), Emese Számadó (Klapka György Museum) and Dávid Bartus (ELTE-Eötvös Loránd University). The excavations were funded by the Municipality of Komárom, the Directorate of the National Cultural Fund of Hungary, the Hungarian Scientific Research Fund (OTKA K 108667) and the Government of Hungary. Work on the present paper was supported by the Hungarian Scientific Research Fund (OTKA K 108667; NKFI 119520) and the MTA-ELTE Research Group for Interdisciplinary Archaeology. made using unplastered stones of different size, as opposed to Cellar 1, which had elaborately plastered walls preserving even the imprints of nine wooden steps leading down from the entrance

However, the new cellar also had some unexpected finds. After excavating the upper layers in 2013, in a depth of 2.70 metres 12 wooden planks with a width of 16-22 cm were found, laid down next to each other in northsouth direction, and below them a 10×10 cm rectangular transverse beam perpendicular to the planks (Fig. 6). These planks and the beam were parts of the wooden ceiling of the cellar which served at the same time as the wooden foor of the room above the cellar - which fell in after an adobe wall of the room had collapsed onto it. A coherent part of that collapsed wall was found down in the cellar, consisting of adobe bricks measuring exactly one Roman foot, just on top of the planks. We found various organic seeds (olive, date, grape, apple, pear, etc.) in great quantity, in cases even remains of the sarcocarp is visible on the surface of the olive seeds. Besides the organic material, huge amount of pottery used for transporting (amphorae), storing (dolia) and processing (mortaria) these foods were found in the cellar.

During the four weeks of excavation in July 2014, the complete wooden ceiling was unearthed in the cellar. During the removal of the upper layers above the wooden structures very rich material was found: a lot of pottery shreds, terra sigillata, bronze brooches and numerous iron objects and metal slags. The most interesting find is the base of a mould-blown glass vessel with the stamp "L PVBLIC", which could be the name of the craftsman, the

² Reports on the last seasons: BARTUS et alii 2012; BARTUS et alii 2014A; BARTUS et alii 2014B; BARTUS et alii 2015; BARTUS et alii 2016A; BARTUS et alii 2016B; BARTUS – BORHY – SZÁMADÓ 2013; BARTUS – BORHY – SZÁMADÓ 2014A; BARTUS – BORHY – SZÁMADÓ 2015. See the complete bibliography of the research in Brigetio since 1992 in BORHY 2014.

³ BORHY – SZÁMADÓ 2009, 250–251.

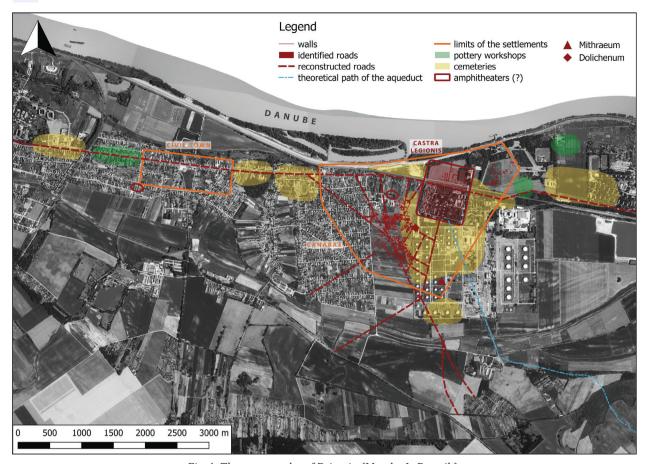


Fig. 1. The topography of Brigetio (Map by L. Rupnik).

owner of the workshop or even the merchant who transported the vessel, which contained oil or some oily substance. Similar vessels were found in Calvatone, Straubing and Pfaffenhofen.4 The collapsed ceiling itself was cleaned and all traces of earth were removed from the wooden planks. The complete size of the ceiling was 4.4×2.4 metres. The cleaning of the wooden structures was extremely time-consuming, due to the fragile surface of the wooden planks and the necessity of keeping the moisture level as high as possible.⁵ The thickness of wooden planks was originally 3 cm, while the transverse beams at least 7 cm (their actual thickness is only 3 mm and 3-4 cm, respectively). This solid structure could even hold the weight of a presumed masonry floor on top of the wooden

structure, which was described by Vitruvius (*De arch*, 7.1) and served as an effective method of fire prevention.⁶ As another result of the survey, it could be observed that the wooden parts of the ceiling had been infected with beetles before it collapsed down to the cellar. After the complete documentation of the cellar, small samples were taken from the wood for further analysis, the whole structure was prepared with Kemobicid DP3 antifungal agent, then the cellar was covered back again with a temporary wooden roof.

The first task of the excavation in 2015 was removing this roof, then cleaning and conserving the Roman wooden ceiling. After the conservation of the wooden planks they were taken out by restorers, then we started the excavation of the lowest layers of the cellar. In a depth of approximately 170 cm from the original ceiling level, a very large amount of pottery have been found on the floor of the cellar. It was concentrated to the southern end of the cellar, where the collapsed wooden ceiling was missing, which

SEITTER 2002, 475, 525–526. We would like to thank to Kata Dévai for providing the information and analogies of the glass vessel.

A survey of the structure was made in 2014 by restorers Eszter Harsányi and Zsófia Kurovszky under the supervision of András Morgós (National University of Cultural Heritage, South Korea).

⁶ ULRICH 2007, 112-113.



Fig. 2. Plan of the excavations at Szőny-Vásártér, 2012 (Plan by L. Dobosi).



Fig. 3. Plan of the excavations at Szőny-Vásártér, 2013 (Plan by L. Dobosi).

indicates that originally there was an opening on that side of the ceiling used as an entrance to the cellar. After the cellar had been abandoned, but before the collapse of the ceiling, a large amount of pottery - including a lot of terra sigillata vessels - and other rubbish was thrown down the floor of the cellar through the entrance opening (Fig. 7, red). The "other rubbish" was surprisingly includes a Roman bronze cavalry parade helmet, which is one of the most extraordinary finds of the last years in Brigetio (Fig. 8). In the northern half of the cellar, under the collapsed ceiling, an amphora of type Dressel 20 has been found, which was originally served as a container for olive oil from Baetica (Fig. 7, blue). Some of the tituli picti were also preserved on the surface of the *amphora*, including the β -inscription with the name of M. Pompeius Callistus, a merchant known from five amphora inscriptions from the Monte Testaccio, one of them with the consular date of 147 AD. That indicates that the cellar was abandoned sometime in the Antonine Age and was used as a garbage pit until the end of the 2nd century, according to the terra sigillata finds form the cellar.8

Some metres southeast to Cellar 2 a large pit measuring 5 × 4 m has been found in 2014 (Fig. 4), which contained a huge amount of iron slags weighing hundreds of kilograms, as well as bronze brooches, bone hairpins and a lot of pottery. It could be served as a waste pit related to nearby iron-working activities. In a depth of more than three metres, we have surprisingly found remains of stone walls next to and parallel with the northern and southern clay walls of the pit, which means that the pit was originally a cellar (Cellar 3) with stone walls. The walls of the cellar were systematically taken out as building material after the abandonment of the cellar, only the lower rows of the wall remained. After that, the pit was filled up with the waste material of the nearby metal workshop.

1.2 Metal workshop

In 2012, some metres to the northeast in the vicinity of Cellar 1, a presumed metalworking area was unearthed in a courtyard (Fig. 2),

with three furnaces and great amount of bronze slags, as well as some half-finished products, fragments of crucibles and terracotta moulds including one representing Mercurius, used for casting votive lead figurines (Fig. 9).9 In 2013, we continued the excavation in the same courtyard where huge amount of iron slags were found, which indicate that besides lead and bronze, iron was also worked here. In 2014 and 2015, we excavated a large pit (identified later as Cellar 3) measuring 5×4 m (Fig. 4-5). The more than two metres deep pit contained a huge amount of metal finds, mostly iron slags weighing hundreds of kilograms. Bronze brooches, bone hairpins and a lot of pottery were also found in the same pit, which could be served as a waste pit related to nearby iron-working activities. A small gray coarse ware bowl contained blue pigment raw materials, which can supposedly be identified as lapis lazuli and "Egyptian blue", according to the first analyses. 10 One of the most important finds of the area is a small bronze head with the depiction of a Germanic warrior, which was found some metres east of the pit, and fits well in the series of similar representations on bronze objects from Brigetio.¹¹

1.3 The street and the bakery

Main aims of the 25th excavation campaign in 2016 were to continue the excavation of the so-called bakery at the western side of the site and locating the southern part of Street "A", both identified and partly unearthed in 2000.

According to the results of the excavations in 2016, the street continues to south, where its surface covered with large stone slabs was found. Several foundation periods could be separated in a sondage next to the stone slabs. Some parts of a building were found west to the street which had at least one phase which precedes the construction of the street, since its east-west wall goes under the lowest foundation layers of the street. The imprint of a threshold was also found in this wall, which connected two rooms in the building. A small drain made of

⁷ BORHY 2016, 17–27, Kat. 1, 1a-y. kép.

⁸ BORHY - BARTUS 2016, 105-106.

⁹ BARTUS 2014A; BARTUS 2014B.

¹⁰ The preliminary analyses were made by Sz. Döbröntey-David and N. Sey to whom we are grateful.

¹¹ See the article on Germanic representations by L. Juhász: JUHÁSZ 2014, 334.



Fig. 4. Plan of the excavations at Szőny-Vásártér, 2014 (Plan by L. Dobosi).



Fig. 5. Plan of the excavations at Szőny-Vásártér, 2015 (Plan by L. Dobosi).



Fig. 6. Wooden planks in Cellar 2 (Photo by D. Bartus).

tiles was found in 2000 northwest to the abovementioned building, however, no further traces of it were found in 2016.

At the northern side of the excavation a huge modern pit cut through most of the walls, which made more difficult to interpret the periods. In a small sondage of 1×1 metres, traces of wooden foundation of a building before the stone period were found. East of that the western wall of the so-called bakery and another wall going from east to west (presumably from an earlier period) were found.

1.4 Find material

The find material of the excavations between 2012 and 2016 was very abundant. Besides the material of the above-mentioned cellars, we have found several bone hairpins and needles, a circular bronze disc with email decoration, a half-finished votive lead figurine and a rectangular, blue glass paste gem, bronze and silver coins, a bone hairpin with golden head, two iron brooches, a small terracotta head and a lead object with letters O and M, a bronze stylus and a chalcedony gem with the representation of Minerva or Dea Roma. A bronze figurine of Amor

should also be mentioned (Fig. 10). It has been found in a 3rd century AD demolition layer consisted of bricks and tiles, obviously in secondary position. The figurine belonged most probably to a household shrine in a neighbouring building. Among the numerous brick stamps, considerable amount of "CFH" and variations of legio I Adiutrix were found: e.g. leg(io) I A(diutrix); leg(io) I A(diutrix) P(ia) F(idelis); leg(io) I A(diutrix) P(ia) F(idelis); leg(io) I A(diutrix) P(ia) F(idelis); leg(io) I Ad(iutrix) P(ia) F(idelis); dux li(mitis) Sarm(aticae)?; etc. As usual, huge amount of locally made and imported pottery and great quantity of animal bones were found.

2. Canabae legionis (Szőny-Dunapart)¹³

2.1 Preventive excavations in 2014

The *canabae* of Brigetio (Fig. 1) is a lesser-known part of the ancient town, since no

¹² BARTUS 2015, 67, no. 44.

¹³ Reports on the last seasons: BARTUS – BORHY – SZÁMADÓ 2014B; BARTUS – BORHY – SZÁMADÓ 2015; BARTUS *et alii* 2016B. BARTUS – BORHY – CZAJLIK 2016. See the complete bibliography of the research in Brigetio since 1992 in BORHY 2014.

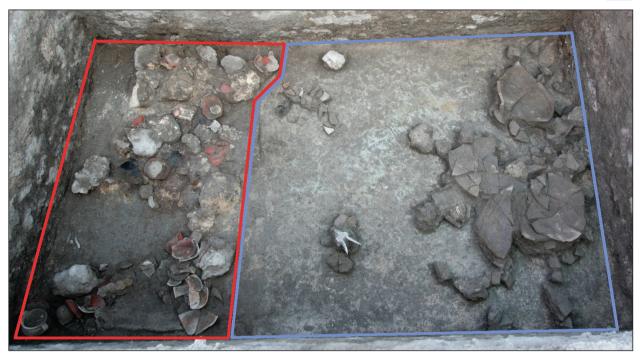


Fig. 7. The place of the collapsed ceiling (blue), and the rubbish thrown down after the abandonment of Cellar 2 (red). (Photo by D. Bartus).

systematic excavations were carried out in this territory, in contrast with the civil town where annual excavations have started in 1992 with outstanding results. Although some small-scale excavations made in the first part of the 20th century were bringing to light very important buildings (e.g. the Mithraeum and Dolichenum) and burials in the *canabae*, ¹⁴ detailed informations on the settlement structure were provided only by the recently began project on the *canabae* and legionary fortress. ¹⁵

In the summer of 2014, the long-planned construction work of the new flood control dam between Komárom and Almásfüzitő has started, which, according to its only possible location close to the Danube, crosses the northest part of the Roman *canabae*. Since the affected area is a well-known and highly protected site, archaeological impact assessment made prior to the construction indicated the obvious necessity of full-scale preventive excavations in the territory of an approximately one hectare. The excavations were started in August, 2014 in

the cooperation of the Klapka György Museum of Komárom and the Department of Classical and Roman Archaeology of ELTE–Eötvös Loránd University.

Shortly after the removal of topsoil all previous expectations were surpassed by the extraordinary intensity of the site, where huge parts of terrazzo-floors, traces of walls, massive layers of bricks and stones were visible in literally the whole surface. These features already indicated that full excavation of the site is impossible within the given time frame of two months, however, we started to open trenches and sections from west to east and tried to gather as many data as possible.

In the western edge of the site, part of a stone building (approximately 30 m²) with massive terrazzo-floor and at least two periods were found. Three Late Roman graves were cut into the floor, obviously without the intention of choosing deliberately the thick, hard terrazzo of an earlier building instead of the nearby soft soil, which indicates that buildings in this part of the *canabae* had been already collapsed and covered (at least the floors) before the remaining population started to use it as a cemetery. The phenomenon of moving to nearby forts in Late Roman times while using the abandoned settlement as a

¹⁴ On the early excavations in Brigetio see SZÁMADÓ 1997.

¹⁵ BARTUS et alii 2014C; BARTUS - CZAJLIK - RUPNIK 2016; BORHY et alii 2017; VICZIÁN et alii 2013; VICZIÁN et alii 2015.

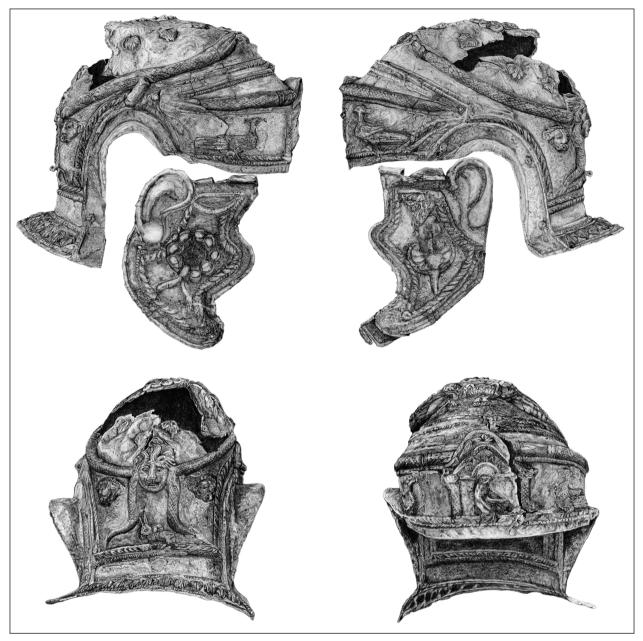


Fig. 8. Bronze parade helmet from Cellar 2 (Drawing by J. Burucs).

cemetery is well-known in numerous sites, however, this is the most obvious evidence in the case of Brigetio so far.¹⁶ Two of the three burials were completely robbed while the third one was intact but without any grave goods, therefore closer date of the graves is not possible.

About 20 metres east of the graves, part of another building was found (approximately $60 \, \text{m}^2$) with a terrazzo-floor of three periods and a *hypocaustum* (Fig. 11). A total of 18 metres of heating tunnels with rectangular pilae stacks

were uncovered. The walls of the building were constructed of adobe bricks on stone foundation. We did not find the closing walls of the buildings, therefore it was probably much larger than the excavated part of it. A coin of Antoninus Pius found in the foundation layer of the earliest terrazzo-floor indicates that the building was erected in the second half of the 2nd century AD, probably after the Marcomannic wars and were in use until the Late Roman period according to the coins found in the topmost layers of the building.

¹⁶ See BARKÓCZI 1951, 22.



Fig. 9. Silicon cast of the Mercurius figurine from the terracotta mould (Sz. Döbröntey-David).

2.2 The so-called "Roman bath"

The most important result of the excavations in 2014 was the discovery of a large rectangular building, identified as a bath, 17 which was situated some 40 metres east of the abovementioned building (Fig. 12-13). The rooms of the bath were covered with terrazzo-floors of good quality, one of them was preserved in more than 100 m², which is the largest terrazzo ever found in Brigetio (Fig. 14). Traces of underfloor heating were found in four rooms. In the westernmost room some of the circular pilae stacks were preserved in original place and condition with the covering tiles and terrazzo-floor in situ. The floor of the central, apsidal room (presumably a *caldarium*) of the building was supported with more than 100 rectangular pillars. The praefurnium was located next to the "caldarium", where a lot of ash and burnt layers were found.

The imprints of the two lower stones or bricks of an arched opening in the apse were also found, which connected the *praefurnium* with the apsidal room. The bath was supported with numerous drains, one of them could be traced under the heating system of the apsidal room.

In summer 2016, the main aim of the season was excavating the southern part of the bath in a territory of approximately 500 m². We found several features in 2014 (walls, floors, drains) which seemed to continue in southern direction and this assumption was confirmed even by the time of the removal of topsoil.

The main north-south corridor with underfloor heating and terrazzo-floor at the western part of the building was continued for seven metres more to the south, parts of pilae stacks and impressions of them in the floor of the *hypocaustum* were also found, however, not as much as in the northern part of the corridor. Two *praefurnia* were located at the eastern side of the corridor in a distance of six metres from each other, which provided the heating of the *hypocaustum*. It seems that they belong to different periods, presumably the

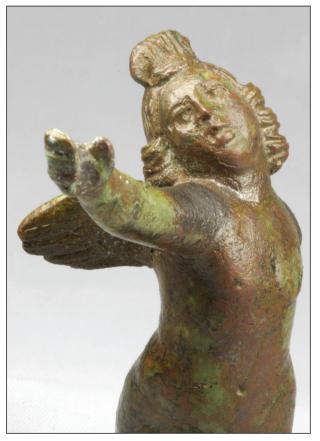


Fig. 10. Bronze figurine of Amor (Photo by D. Bartus).

¹⁷ As of 2017, after four years of excavation the original interpretation as bath is at least doubtful, however, in this article we will use the term "bath" for the building.



Fig. 11. Terrazzo-floor and hypocaustum of a building in the canabae (Photo by D. Bartus).



Fig. 12. Plan of the so-called "Roman bath" (Plan by D. Bartus).

southern praefurnium was abandoned after the construction of a large rectangular room east to the corridor. This room, which also had full underfloor heating, a praefurnium and terrazzofloor, had at least two construction phases. An approximately 40 cm wide and 6 metres long repairing can be seen in the floor of the hypocaustum, which indicates that in the first phase the room was actually two separate rooms. then in the next phase the partition wall was removed, its place was covered by the repaired hypocaustum floor and the two former rooms created a large one of at least 60 m². A slight difference in the composition of pilae stacks north and south to the above-mentioned repairing also strengthen this assumption. In a small sondage opened in the middle of the room the junction of two earlier walls were found, which could belong to a period even before the first phase of the large room. The southern praefurnium of the western corridor could also belong to this early phase. As it can be seen, understanding the construction phases and periods of the building still requires further investigation. A small hint can be the

present state of walls: since most of the walls still visible or traceable near the surface were taken out in the 19th–20th century when the site was used as a quarry, particularly the foundations of earlier walls removed by the Romans can now be unearthed in good condition.

East to the above-mentioned rectangular room several walls (mostly took out in the 19th–20th century) were found with parts of terrazzo-floors and some *hypocaustum*, however, their interpretation is still unclear. At the southeastern part of the building a large terrazzo floor of more than 20 m² were found. A large part of a wall-painting fallen down to the floor was lying on it upside down. Some details of the wall-painting have already been revealed during restoration, notably two winged female figures (most likely two Victorias) and remains of an *aedicula* richly decorated with stucco. Some metres east to the wall-painting we found a Late Roman grave cut into the floor of the room.

At the eastern side of the building the "main" south-north drain was continued for about ten metres to the south and led to a



Fig. 13. Orthophoto of the so-called "Roman bath" (Photo by D. Bartus).



Fig. 14. The northern part of the building, excavated in 2014 (Photo by Zs. Varga).

Y-shaped junction going (in fact, coming from) southeast and southwest. The bottom of the drain was covered with *tegulae*, most with the stamp of legio I Adiutrix. Two other drains were found, one going from south to north at the western end of the building, and another one from west to east, north of the presumed northern wall of the building. The west-east drain flows into the "main" eastern drain. It seems that these three drains are situated outside the building and mark the dimensions of the bath.

As in 2014, the find material was very scarce again. Noticeable is the very large quantity of brick stamps and the huge amount of wall-paintings, mostly from the *hypocaustum* of the north-south corridor.

The so-called "Roman bath" had at least two periods, it can be observed in one place that the wall of the earlier period was taken down and the new wall was built next to it, while the floor of the room was built on the top of the earlier wall, using it as a foundation. The pebbly floor of the earlier phase was found in some places, however, the function of the earlier building as a bath can not be confirmed as yet. The chronology of the building is doubtful, because it seems the building was completely and systematically cleaned before abandonment, which is indicated also by the scarce find material from the upper layers, without almost any datable objects. That the earlier layers also provided very few finds is the evidence of the involvement of military

troops in the construction works of the *canabae*. The main difference of the military architecture of the canabae comparing with the buildings excavated in the civil town is that in the latter a lot of debris were used as filling material. which produces a lot of finds - especially pottery - during the excavations, while soldiers in the canabae used actual building materials. Therefore - at least for the time being - the building time of the bath can not be securely confirmed, however, the chronology of the abovementioned neighbouring buildings can possibly be extended to the bath. The abandonment of the bath is also indicated by two Late Roman graves cut into the hypocaustum of the central apsidal room. Functions of the rooms are also uncertain except for the praefurnium and the so-called caldarium.

2.3 Horrea

The excavation area of 2015 was located east to the so-called "Roman bath" in a territory of 600 m², where earlier aerial photography has shown traces of a very intensive settlement part.

At the eastern end of the excavation area a building with large, massive walls has been found. The southern wall of the building is at least 30 metres long, of which a section of 13 meters has been unearthed, together with the southwest corner and traces of the western wall. Five buttresses are connecting to the outside of the southern wall, which indicates that the

building was a *horreum* (*Horreum* 1). Similar buttresses were commonly used in *horrea* to carry the heavy roof of the building. The floor of the building, which was obviously raised with a *suspensura*, is not preserved. The building had been abandoned and probably demolished before its area was used for funerary practices attested by Late Roman child burials.

The neighbouring rectangular building, measuring approximately 11×11 metres, can also be reconstructed as a *horreum* (*Horreum* 2). We have found 21 postholes spaced regularly

in a grid of 7×5, these posts supported the wooden floor of the first period of the building. The *horreum* was built in stone later, its stone walls and six of the rectangular pillars which supported the floor have also be found. The impress of a wooden beam is visible on the top of a pillar, which indicates that the floor was made of wood in the second period as well.

Between the two *horrea* a street leading north-south has been found, its pebbly surface was renewed several times. At western part of the excavation area a large stone building with

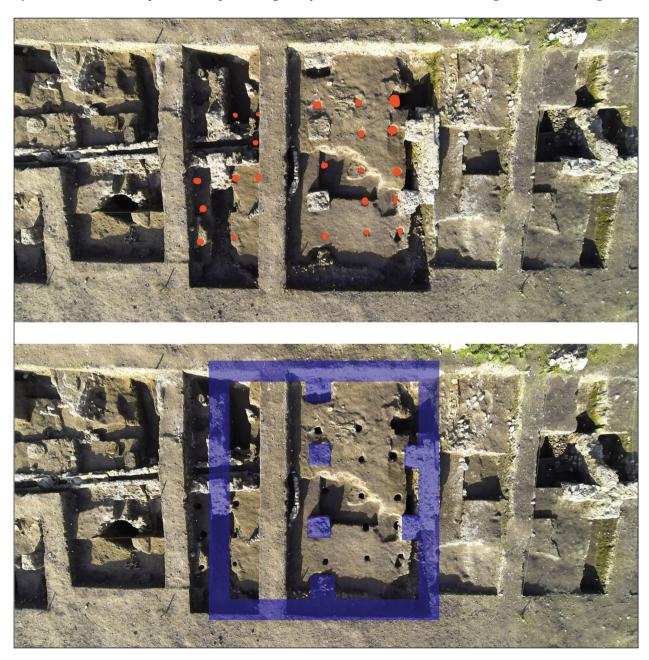


Fig. 15. The first (above) and second period (below) of *Horreum* 2 (Photo by D. Bartus).

hypocaustum has been found. It is unclear, yet, whether it was a public building or a house, however, it has several building periods. As it could be observed, the building had stone foundations supporting adobe walls and it was decorated with wall-paintings. Terrazzo walls and sewers have also been found in the building. In the 3rd century AD, the building was burnt down but it was rebuilt later.

The abundant find material of the excavation mostly consists of pottery and animal bones, of which a complete skeleton of tortoise should be mentioned. Similarly to the previous excavation season, more than 200 brick stamps have been found, mostly of the legio I Adiutrix. Several crucibles have been found in the eastern part of the excavation area but we could not localize the presumed bronze workshop. One of the most remarkable finds of the excavation is a golden *aureus* of Vespasian, datable to 77/78 AD (Fig. 16).



Fig. 16. Golden aureus of Vespasian (Photo by D. Bartus).

2.4 Other features and the find material

Some other buildings with terrazzo floors and additional burials were unearthed during the excavations, moreover, traces of a bronze workshop were found in the yet unexcavated part of the site, where during the removal of the topsoil numerous bronze objects (including a figurine of Lar¹⁸), half-finished products and fragments of crucibles were found.

At the eastern end of the site several pits, trenches and burials were found datable to the Early Iron Age and the Roman Period.

The find material was very scarce, especially in the western part of the site. Noticeable is the very large quantity (about 500 pieces) of brick stamps, almost exclusively made by the

legio I Adiutrix, however, some other troops (e.g. cohors VII Breucorum, legio XXX Ulpia Victrix) are also presented. Most of the coins were found in the upper layers with metal detector, an interesting assemblage of 103 Late Roman coins came to light at the western edge of the site from a pit which also contained modern objects.

3. Legionary fortress (Szőny-MOL-Kiskertek)

The legionary fortress of Brigetio is the least researched with modern methods of the three main topographical parts of Brigetio.¹⁹ The planned excavation in the legionary fortress in summer 2015 was concentrated in the center of the *castra legionis*, at the site Szőny-MOL-Kiskertek. Three surfaces of 100 m² were opened, two of them in the north-south axis, the third one 40 metres to the east.

3.1 The eastern surface

The eastern surface was opened at the exact place where one year before the inscribed bronze tablet with the law of Philippus Arabs said to have been found by metal detector in 2014 (Fig. 17.),²⁰ with the aim of finding additional fragments of the tablet. Surprisingly, in the second day of the excavation a small bronze fragment with six engraved letters came to light, which fits perfectly to the bottom of the bronze tablet. This fragment also confirms the findspot of the tablet. The new fragment - as well as the others - was in secondary position in a Late Roman layer. Another important result from the eastern surface was locating a street leading north-south, parallel with the via decumana. The street has five periods, of which the first three was covered with a very hard, pebbly surface. In the 4th period, which can be dated most probably to the Severan age based on terra sigillata finds from Westerndorf in its foundation, the street was covered by stone slabs. There was a sewer at the eastern side of the street, in which a bronze wagon attachment with grotesque head has been found (Fig. 18). In Late Roman times the street

¹⁹ On the previous research, see BORHY *et alii* 2011, 45-48; BARTUS – BORHY – SZÁMADÓ 2015; BARTUS – BORHY – CZAJLIK 2016.

²⁰ BORHY – BARTUS – SZÁMADÓ 2015A; BORHY – BARTUS – SZÁMADÓ 2015B.

¹⁸ BARTUS 2015, 79-80, No. 60.



Fig. 17. The bronze tablet of Philippus Arabs (D. Bartus).



Fig. 18. Bronze wagon attachment with grotesque head (Photo by D. Bartus).

was not in use anymore, the stone pavement of the street was taken out and new buildings were erected, traces of which have been found in the topmost layers.

3.2 The *principia*

The two western surfaces were opened in the presumed location of the principia. In the northern section we have found part of a large courtyard which extended beyond our surface of 100 m² in all directions and can be identified as the courtyard of the principia with five periods (Fig. 19–20). The precise dating of the layers will be possible only after the evaluation of the finds, however, some preliminary observations can be made. The first period can be dated to the first years of the reign of Trajan, when the legionary fortress was built. The courtyard was covered with a terrazzo-floor on clay foundation. Sometimes later the level of the courtyard was raised by 30 cm and the new courtyard had a very hard, pebbly covering (Period 2). The upper

2-3 centimetres of that pebbly floor is burnt all over the courtyard, which means that the principia suffered heavy damages, most probably during the Marcomannic wars. The courtyard was renewed soon after with another pebbly floor without foundation (Period 3) and finally the whole surface was covered with stone slabs in the Severan age (Period 4), together with the abovementioned eastern street, and remained in use until the Late Roman period. The stone slabs were taken out already in Late Roman times (Period 5), together with the pavement of the street. In the other section 15 metres south, we have found the southern end of the courtyard with the same layers and periods, as well as remains of walls and terrazzo-floors south of the courtyard, which could belong to the principia building. The most important finds from the courtyard are more than 50 fragments of a large imperial inscription carved in stone, which is under evaluation at the moment, but it will most likely shed new light on the legionary fortress of Brigetio.



Fig. 19. Periods of the *principia* (Photo by D. Bartus).

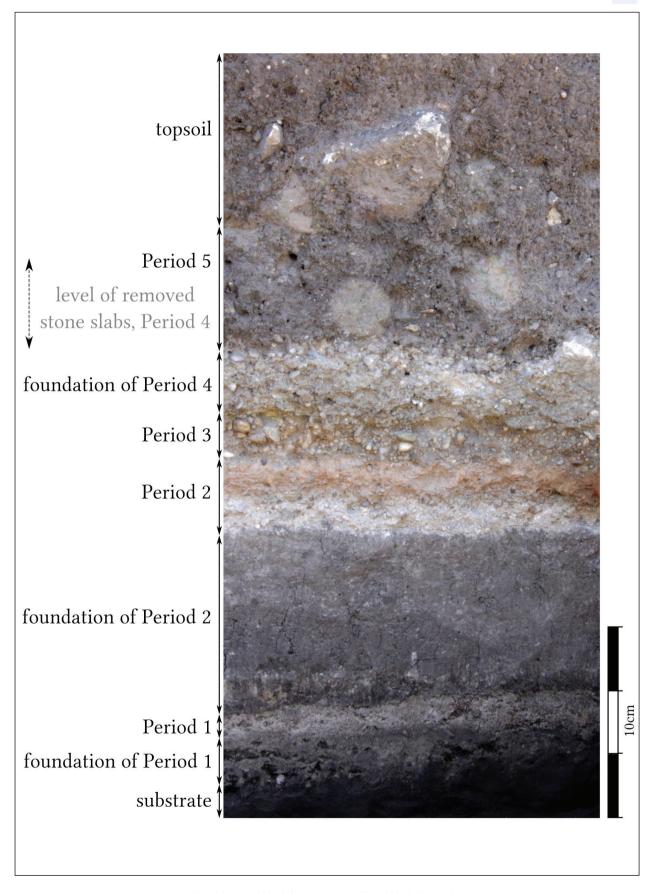


Fig. 20. Periods of the *principia* (Photo by D. Bartus).

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ABBREVIATIONS

In alphabetical order

AA = Archäologischer Anzeiger

AARGNews = Aerial Archaeology Research Group News

ActaArchBrig = Acta Archaeologica Brigetionensia

ActaArchHung = Acta Archaeologica Academiae Scientiarum Hungaricae

ADPV = Abhandlungen des Deutschen Palästina-Vereins

AEA = Archivo Español de Arqueologia

AEp = L'Année Épigraphique

AForschMB = Archäologische Forschungen zu den Grabungen auf dem Magdalensberg

ANRW = Aufstieg und Niedergang der römischen Welt

ANSMN = American Numismatic Society Museum Notes

Antaeus = Antaeus. Communicationes ex Instituto Archaeologico Academiae Scientiarum Hungaricae (1970-1985: Mitteilungen des Archäologiscen Instituts der Ungarischen Akademie der Wissenschaften)

AntAfr = Antiquités Africaines

AnthrAnz = Anthropologischer Anzeiger

AnthrKözl = Anthropologiai Közlemények

AntHung = Antiquitas Hungarica - A Klasszikus Örökség

AntJ = The Antiquaries Journal

AntTan = Antik Tanulmányok

AqFüz = Aquincumi Füzetek

AR = Archeologické Rozhledy

ArchÉrt = Archaeologiai Értesítő

ArchKorr = Archäologisches Korrespondenzblatt

Arrabona = Arrabona. A Győri Xantus János Múzeum Évkönyve

AW = Antike Welt

BABesch = Bulletin Antieke Beschaving

BAR-IS = British Archaeological Reports - International Series

BJ = Bonner Jahrbücher des Rheinischen Landesmuseums in Bonn und des Vereins von Altertumsfreunden im Rheinlande

BudRég = Budapest Régiségei

CahTun = Cahiers de Tunisie

CarnJb = Carnuntum Jahrbuch

ČNM = Časopis národního Musea v Praze

CommArch Hung = Communicationes Archaeologicae Hungariae

Dacia = Dacia. Revue d'archéologie et d'histoire ancienne

DaM = Damaszener Mitteilungen

DissArch = Dissertationes Archaeologicae ex Instituto Archaeologico Universitatis de Rolando Eötvös Nominatae

DissPann = Dissertationes Pannonicae ex Instituto Numismatico et Archaeologico Universitatis de Petro Pázmány Nominatae Budapestinensis Proveniente

DNP = Der Neue Pauly. Enzyklopädie der Antike

FiL = Forschungen in Lauriacum

FolArch = Folia Archaeologica

Gnomon = Gnomon. Kritische Zeitschrift für die gesamte klassische Altertumswissenschaft

HistCarp = Historia Carpatica

HMRK = Heves Megyei Régészeti Közlemények

HNM = Hungarian National Museum

HOMÉ = A Herman Ottó Múzeum Évkönyve

JDAI = Jahrbuch des Deutschen Archäologischen Instituts

IGL = Inscriptions Grecques et Latines de la Syrie

LIMC = Lexicon Iconographicum Mythologiae Classicae

IKARUS = Innsburcker Klassisch-Archäologische Universitätsschriften

JAMÉ = Nyíregyházi Jósa András Múzeum Évkönyve

JRS = Journal of Roman Studies

JÖAI = Jahreshefte des Österreichischen Archäologischen Institutes in Wien

KDMK = Kuny Domonkos Múzeum Közleményei

KMMK = Komárom-Esztergom Megyei Múzeumok Közleményei

Latomus = Latomus. Revue d'Études Latines

LIMC = Lexicon Iconographicum Mythologiae Classicae

LAAJ = Late Antique Archaeology Journal

MBV = Münchner Beiträge zur Vor- und Frühgeschichte

MFMÉ = A Móra Ferenc Múzeum Évkönyve

MHIM = Military History Institute and Museum

MittArchInst = Mitteilungen des Archäologischen Instituts der Ungarischen Akademie der Wissenschaften (1986- Antaeus. Communicationes ex Instituto Archaeologico Academiae Scientiarum Hungaricae)

MPK = Mitteilungen der Prähistorischen Kommission

MRGK = Materialen zur römisch-germanischen Keramik

NK = Numizmatikai Közlöny

NMMÉ = Nográd Megyei Múzeumok Évkönyve

NNM = American Numismatic Society. Numimatic Notes and Monographs

NumAntCl = Numismatica e Antichità Classiche

RCRFA = Rei Cretariae Romanae Fautorum Acta

RE = Paulys Realencyclopädie der classischen Altertumswissenschaft

RégFüz = Régészeti Füzetek

RhM = Rheinisches Museum für Philologie

RKM = Régészeti Kutatások Magyarországon- Archaeological Investigations in Hungary

RLÖ = Der römische Limes in Österreich

RM = Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung

RSL = Rivista di Studi Liguri

SchwMüBl = Schweizer Münzblätter

SlovArch = Slovenská Archeologia

SMK = Somogyi Múzeumok Közleményei

SoSchrÖAI = Sonderschriften des Österreichischen Archäologischen Institute

StComit = Studia Comitatensia

StHist = Studia Historica. Historia Antigua

ŠtudZvest = Študijne Zvesti Arheologického Ústavu Slovenskej Akademie Vied Nitra.

Światowit = rocznik poświęcony archeologii przeddziejowej i badaniom

SaalbJb = Saalburg- Jahrbuch

Terra Sebus = Terra Sebus: Acta Musei Sabesiensis

VAMZ = Vjesnik Arheološkog Muzeja u Zagrebu

ZM = Zalai Múzeum

ABBREVIATIONS OF ANTIQUE SOURCES

In alphabetical order

Cic, Verr. = Cicero, in Verrem actio

Macr, Sat. = Ambrosius Aurelius Theodosius Macrobius, Liber Saturnalia

Marcellin, Med. = Marcellus Ulpius, De Medicamentis

Pers. = Aulus Persius Flaccus, Satirae

Plaut, Rud. = Titus Maccius Plautus, Rudens

Porph, Hor. Sat. = Pomponius Porphyrius, Comentarii in Horatium Flaccum

Schol. Hor. Sat. = Keller, O.:Pseudacronis Scholia in Horatium Vetustiora (1902)

Schol. Pers. = Wessner, P.: Scholia in Iuvenalem Vetustoria (1931 Stuttgart)

Suet. = C. Suetonius Tranquillus, De vita Caesarum

Varro, ling. = M. Terentius Varro, De lingua Latina

Vitr, De Arch. = Vitruvius, De architectura libri decem

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