

NEW DATA ON THE HISTORY AND TOPOGRAPHY OF AD MURES (ÁCS-BUMBUMKÚT, HUNGARY) ON THE *RIPA PANNONICA* AND THE QUESTION OF THE PANNONIAN BORDER (3RD–4TH CENTURY CE)¹

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Abstract: In the last 200 years, only minor excavations and fieldwalkings have been carried out in the area of the fort of Ad Mures. The collected information was useful, but not sufficient to define the role and significance of the fort on the *ripa Pannonica* and to outline its history. In recent years, the Eötvös Loránd University has carried out geophysical and field surveys, as well as a short excavation campaign in 2023. The results of these works helped to clarify the issues of previous research.

Although the troop(s) guarding the fort are still unknown, we present that the *legio X Gemina*, the *legio II Italica* and the *cohors I Aelia milliaria sagittariorum* were certainly involved in the (re)construction works of the fort. An important observation is that the tile stamps of the *legio I Adiutrix*, the garrison legion of Brigetio, are missing from the site even though the fort and the fortress are quite close to each other. Regarding the troops mentioned on the stamps, we outline similarities between Ad Mures, Ad Statuas, Arrabona, Quadrata and Gerulata. Based on these, we assume that the theory that B. Lőrincz and P. Kovács have proposed about the common border of Pannonia Inferior and Superior after 214 CE, i.e. that the border was east of Ad Mures, can be confirmed by the results of the latest excavations. In addition, regarding the topographical research, the most probable line for the border is the valley of the Concó stream.

INTRODUCTION

In frame of a national research project the Department of Classical and Roman Archaeology and the Department of Archeometry and Archaeological Methodology of the Eötvös Loránd University (Budapest) started complex research on the northern part of the Pannonian *ripa*. Methodologically, this study is based on results of geophysical surveys and excavations, topographical observations, epigraphic and historical research. The aim of the present paper was to gather new information about the fort of Ad Mures, to better understand its location and its role among the forts along the northern Pannonian limes.

RESEARCH HISTORY OF THE FORT

The research history of the area around the Bumbum-kút site goes back to the end of the 19th century. The site was first identified as Ad Mures in 1874, when R. Sztachovics, writing about the system of Roman roads in the neighbourhood, mentioned that a Roman fort is located at the Danube, near Ács, around the estuary of the Concó stream (Sztachovics 1874, 384). A decade later, R. Gyulai with the help of B. Berkovics found some massive wall foundations in the vineyards of Ács. He described a trapezoidal fort without a northern wall, which he assumed had been destroyed by the river (Gyulai 1886). First, he interpreted the ruins as a road station (Gyulai 1886), but one year later, he referred to them as the fort of Ad Mures.² According to Zs. Visy,

¹ The research was realised through a four-year thematic grant from the National Research, Development and Innovation Office (OTKA K 2020, Grant ID: K134522).

² “... az ácsi szőlőkben van a korábban már tüzetesen leírt Ad Mures nevű, trapez-alakú erőd.” “... in the vineyards of Ács, situated the already in details described, trapezoidal fort called ad Mures.” Here, he cited himself from 1886 (Gyulai 1886).

R. Gyulai's measurements³ could not be correct, and even the proposed shape could not be verified at any of the possible locations of the fortress (Visy 2003, 28). But it seems that R. Gyulai did indeed find some part of the fort of Ad Mures, because he mentions the location: the "Upper-" and the "Papist-" vineyards, the parcels of the Décsi and the Páli family. On the cadastral map of Ács from 1887 (*Habsburg Empire – Cadastral maps (XIX. century)*) the vineyards, where the fort is situated, were called the "Dézsma = Tithe-vineyards", which clearly refers to ecclesiastical taxation. Moreover, the owners of parcels no. 6178, 6182, 6183, 6184, 6184, 6185 were Décsi Bálintné and Zsigmond Pályi in 1888 (*HU-MNL-OL-S 79-529.-1, 323, 324*) which coincides with the currently known location of the fort. However, it is still not known why R. Gyulai presumed that the northern part of the fort was demolished by the river; his statement has no proof yet.

In 1877 R. Gyulai also wrote about a watchtower, at the estuary of the Concó 'at the edge of a small pine forest, which corresponds to the tip of the island' (Gyulai 1887, 4).⁴ This watchtower is yet unidentified,⁵ and the case is problematic. He has found an inscribed slab there (Gyulai 1887, 4; the inscription he referred to is *CIL 03, 10993*), which may prove that the ruins were Roman. However, at about the same mentioned place – on the bluff, opposite the island – a redoubt was built during the Napoleonic Wars. R. Gyulai did not mention the Napoleonic fortification, so there is also a chance that he has found only that, not a Roman watchtower. However, it is likely that the inscription was found at the mentioned place. This way it was not *in situ* but was being reused during the 19th century.⁶

In 1936, A. Graf cited the measurements and the information of the above-mentioned sources, but at some point, his work was not consistent. First, he referred to the works of I. Fehér, and mentioned that a Roman fort was located around the estuary of the Concó, called Ad Mures (Graf 1936, 90). Secondly, he identified Bumbum-kút as a site, where remains of a burgus are visible (Graf 1936, 90). Without knowing he must have referred to the ruins of the fort, not a burgus, which was excavated at the time of his publication by I. Paulovics (Graf 1936, 90, note 5).

In the 1930's, researchers debated whether the site at Ács-Bumbumkút could be identified with Ad Mures. E. Lovas stated in 1937 that Ad Mures could have been located either under the contemporary settlement of Ács or in the vineyards near the estuary of the stream (Lovas 1937, 281).⁷

In the middle of the 20th century, J. Szilágyi wrote about the "fortified camp at Bum-Bum Well", and cited A. Graf (Szilágyi 1952, 203). But as we saw, A. Graf has probably confused the places of the fort and the watchtower, so J. Szilágyi must have relied on the work of L. Barkóczi (Barkóczi 1951, 6). Thanks to L. Barkóczi and D. Gabler, the genuine place of the fort became known and widely accepted (Barkóczi 1951, 6; Fitz 1976, 29; Visy 2003, 28). They also specified the extent of the fort, which they measured 130 (E-W) × 120 (N-S) m. Zs. Visy has found new data in an aerial photograph from 1954 and estimated the N-S walls to be at least 180 m long. Based on the photograph Zs. Visy supposed that the northern part of the fort was destroyed by the Danube (Visy 2003, 28).⁸ In light of our recent results, regarding the stone period of the auxiliary fort, his opinion must be refuted.

Sources mention the fort's excavations on multiple occasions – in 1948, between 1966–1972 and 1989 (Lóki/Szabó/Visy 2011, 61) – but the truth is that before 2023 and apart from 1989, only a few, smaller fieldwork campaigns were carried out. In other works, excavations in 1944, 1948 and 1951 are attributed to L. Barkóczi (Gerecsei/Lakatos 2015, 17), between 1966–1972 to D. Gabler (Petényi 2003, 73), in 1984 and 1988–1989 to

³ The original source of these measurements is unknown. R. Fröhlich wrote that the southern wall was 25 steps long, the eastern was 266 steps, and the western was 200 steps, the missing northern wall could have been 140 steps. He refers to Gyulai's work, but there Gyulai did not mention any detail about the length of the walls (Fröhlich 1887, 163). Later, A. Graf mentioned the same measurements, without citation (Graf 1936, 90).

⁴ His statement was not clear, as he could have meant that the burgus was on the island. A. Graf interpreted the text similarly (Graf 1936, 90), but looking at the local topography it seems unlikely that the burgus was built on a low lying (max. 109 m asl.) island. It seems more likely that A. Graf misinterpreted the sentence of R. Gyulai.

⁵ In 1951, L. Barkóczi wrote, he personally did not find the ruins which R. Gyulai was writing about (Barkóczi 1951, 6). In 1976, without explaining it, D. Gabler mentioned that the burgus at Várhegy is the one which R. Gyulai described (Gabler 1976, 29).

⁶ If it was reused in the Napoleonic times, its place of origin must have been nearby, which probably led L. Barkóczi to assume that the monument was from the fort of Ad Mures. See below.

⁷ E. Lovas has also mentioned that some said that Ad Mures could be identified as Ács-Vaspuszta, but he did not find any proof of this claim.

⁸ Zs. Visy has also made a field survey in 1985, when he could observe the trenches on the ground, which were visible on the photographs.

E. Tóth.⁹ But, there is no direct proof of their work.¹⁰ The only proper documentation exists from a rescue excavation in 1989, which was carried out by S. Petényi. He worked at Bumbum-kút because a nursery garden was being created. The need for an excavation was reported by E. Tóth to the authorities.¹¹

After the millennium, research has been restarted in the area, because of the world heritage nomination of the Danubian Limes (See the cited works of Zs. Visy.), and some rescue excavations were carried out in the area of the vicus by Anna Győri-Pórszász in 2022.¹²

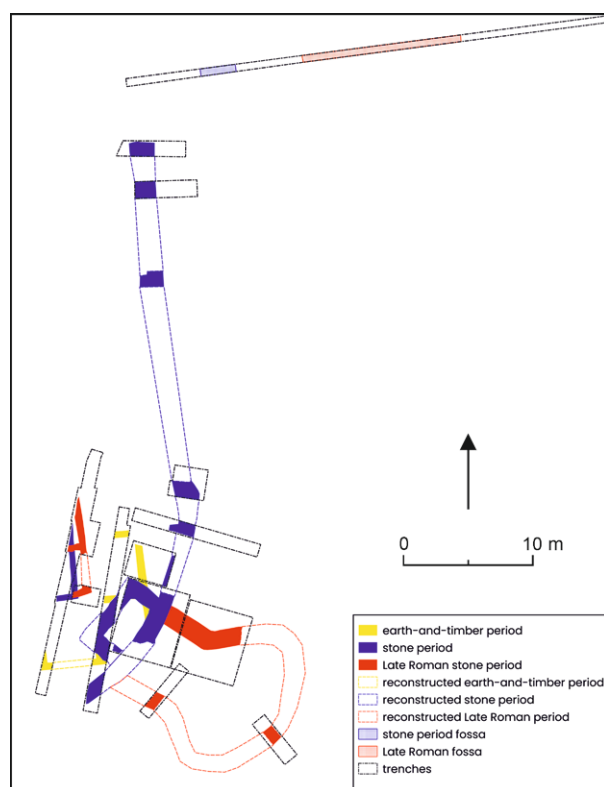


Fig. 1. Map of the 1989 excavation in the fort of Ad Mures with the identified building periods. Plan B. Simon, based on S. Petényi's documentation.

a total area of 4200 m², three gates, the north-western tower, the wall, and some inner buildings of the fort were identified. Also, an excavation was launched in Spring 2023 to gather information about the periods of the fort and the condition of the detected walls. Based on the results of the excavation, besides some Pre-historic features, three periods of Roman settlement could be determined. We came across similar features like S. Petényi, as the earliest building phase was characterised by wall foundations composed of a mixture of mud bricks and stones, which were cut by the features of the earlier stone period of the fort. The wall, the inner rectangular corner tower, the western gate and the *fossa* of the younger phase of the stone fort were all identified in the opened trenches. The late Roman building phase of the fort could also be clearly identified,

TOPOGRAPHY OF THE FORT

Before recent topographic studies, only the excavation of S. Petényi in 1989 provided a trustworthy plan about the Roman auxiliary fort at Ács-Bumbumkút. Luckily, he prepared a precise and detailed geodetic measurement of the excavation site, which was available for georeferencing. In 1989 he investigated the area of the southeastern corner, where three phases of the fort were identified (Fig. 1). The earliest building was found under the walls of the younger stone fort, the foundations of which were made of yellow mud bricks and layers of stones. The second period is the time of the stone fort, when the walls, the rectangular inner tower and the new inner buildings were built. Sometime in the Late Roman period a fan-shaped tower was built at the fort's southeastern corner and the inner buildings were modified. S. Petényi also unearthed the earlier and the later *fossa* of the fort.

In 2022 and 2023, the Institute of Archaeological Sciences of the Eötvös Loránd University started new investigations to clarify the layout and the chronology of the fort (Simon *et al.* 2023). We started the study based on the excavation results of S. Petényi and an infrared aerial photo from 1990 (Lechner Nonprofit Kft. 1990-0478-0010). With a GPR (ground-penetrating radar) survey, covering

⁹ For the latter excavations we were not able to find any detailed source, just the Heritage Impact Assessment of Ács (http://www.acs-varos.hu/docs/ACS_OROKSEGVEDELMI_HATASTANULMANY.pdf), where at page no. 31 the authors mention the campaigns of E. Tóth without citing any sources.

¹⁰ As D. Gabler stated himself, he has never excavated on the site of Ad Mures, he has just visited and examined it (personal information from D. Gabler). We suppose the same could have happened during the other surveys, after which no archaeological documentation was produced.

¹¹ Documentation stored in the repository of Kuny Domokos Museum (Tata, Hungary): 2013–2015 Ács, Bumbumkút 1989. For details of the excavation, see next chapter.

¹² Documentation stored in the repository of Kuny Domokos Museum (Tata, Hungary): 2024.24 (404229) EuroVelo 6 kerékpáros útvonal Gönyű-Komárom szakaszának kivitelezése.

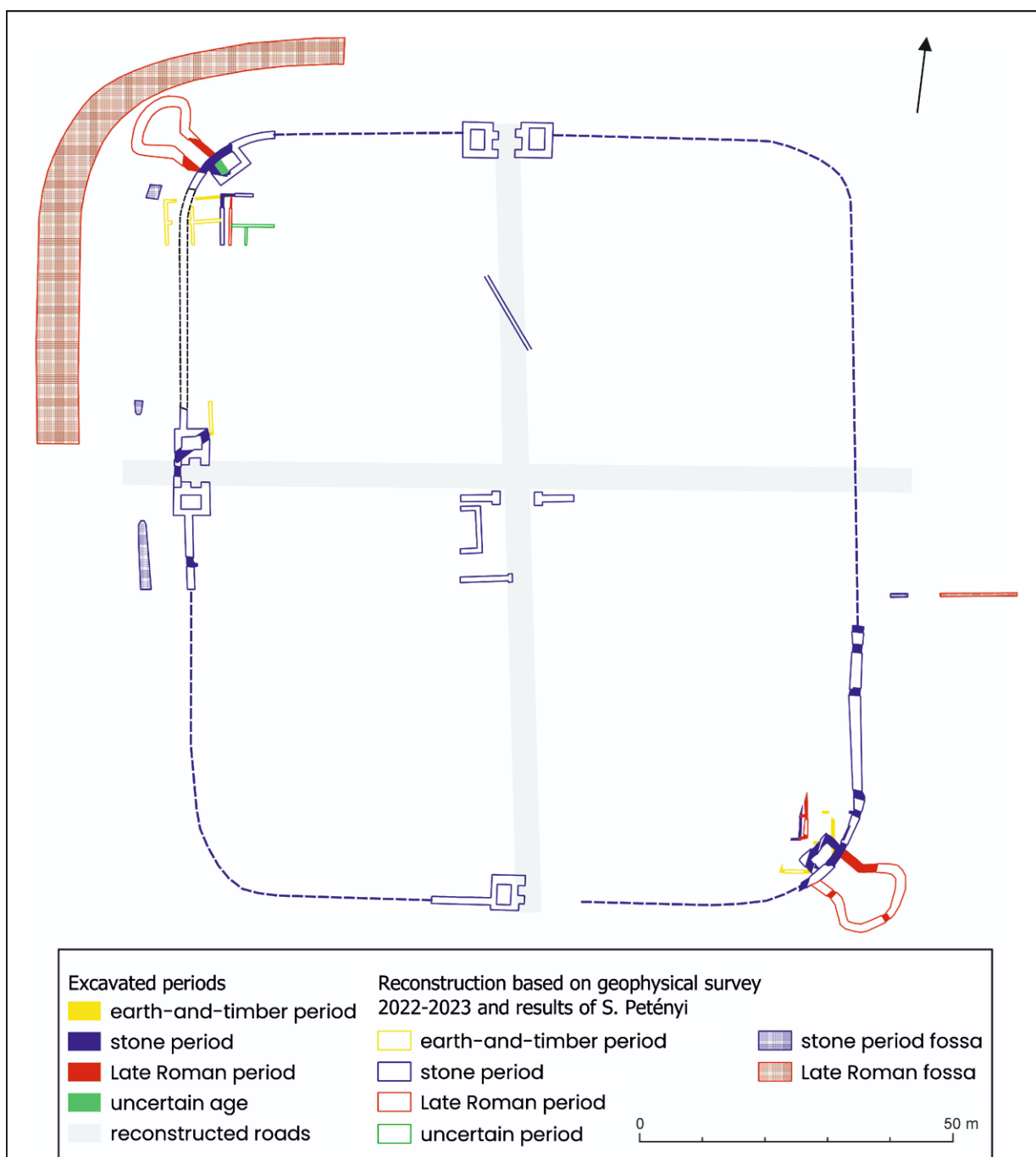


Fig. 2. Summary map of the fort of Ad Mures with the identified building periods (map B. Simon).

as part of a distinctive fan-shaped tower was unearthed at the fort's north-western corner. In the late Roman tower, a layer of ash and rubble from the destruction of the tower has yielded imbrices and tegulae of the *legio X Gemina* as well as a coin of Gratian (375–383 CE), which sheds light on the possible end of the fort.

Based on all relevant archaeological data, the earth-and-timber fort was probably more extensive than the stone period fort or was not in the same area. Nevertheless, the orientation of the earliest buildings is much like the younger ones (Fig. 2).

In its first period, the stone fort had a typical rectangular layout with four gates and four inner corner towers, and it is altogether 106.5 m wide (E–W) and 123.5 m long (N–S). The inner roads, which would normally segment the fort into four quadrants, were not visible on the GPR survey or during the excavation,

but they could be reconstructed. In this period the stone fort was protected with a 2.5 m wide and 2.2 m deep ditch (*fossa*) from the outside.

The fort's dimensions can best be compared to the ones of Ad Statuas, which was 106 m wide and 112 m long (Gabler 2009, 130, 131). Also, the same main building phases were identified in Ad Statuas – an early earth-and-timber one, the period of the early stone fort and the period of the late Roman fort. These are also the main building phases of Pannonian auxiliary forts, so it shouldn't be a peculiarity, but the dimensions of the forts and the destruction layers of the late Roman towers show striking similarities. The quite similar extent was already mentioned, but it has not yet been emphasised that just like the towers of Ad Statuas (Gabler 1972), the one excavated in Ad Mures was covered with tiles bearing the stamp of the *legio X Gemina* at the time of its destruction.

HISTORY OF THE FORT – QUESTIONS OF THE EPIGRAPHIC MATERIAL

Regarding the epigraphic material, the earlier literature has produced some inconsistent information. The main problem is that in the garden of the Esterházy-Liechtenstein-Zichy castle in Ács, a few inscribed stones were recorded, but those could have originated from other, nearby settlements, not just from the fort of Ad Mures. Unfortunately, many of them have been lost during the ages, so their identification is impossible (List of the missing monuments: *CIL* 03, 11020 = *RIU*-03, 00646 = *RHP* 00200; *CIL* 03, 11059 = *RIU*-03, 00647, *RIU*-03, 00648). There are altogether three inscriptions which are thought to have originated from the territory of Ács. The first one is the tombstone of Albanus (*CIL* 03, 04368), the second is an altar, erected to Jupiter and Juno (*CIL* 03, 10993), and the third, lost one is the tombstone of Lucanus (*CIL* 03, 11020).

There are a lot of uncertainties about the tombstone of Albanus.¹³ In recent literature, it seems to have originated from the fortress of Ad Mures (Barkóczy 1951, appendix 11), but in the first publication of the inscription from 1905, H. Hofmann stated that the stone is from Brigetio, from the neighbourhood of Tata (Hofmann 1905, 39). A bit later W. Kubitschek (1912, 129, 130). published the epitaph again, but he provided no information about its origin, just that the stone has been in a museum since 1840.¹⁴ Then A. Schober stated again that the inscription comes from Brigetio (Komárom-Szöny, Komárom-Esztergom County, Hungary) and is stored in the Hofmuseum in Wien (Schober 1923, 92, No. 159; Currently the monument is in the collection of the Kunsthistorisches Museum, Wien, Gabler 1968, 60). From this point onwards the location of the stone's origin was disputed. Because of the mentioned troop on the stone, E. Lovas wrote that the stone must have come from Arrabona (Lovas 1937, 4). Then the RIU (*RIU* 03, 635) gave the most detailed information about the epitaph. The description starts with the same details as the *Corpus Inscriptionum Latinarum* (*CIL* 03, 4368; according to this, it was found in 'Bregetii in Transilvania') stating that the stone was part of the collection of Hieronymus Beck in Ebreichsdorf, already in the 16th century. Then the RIU carried on by citing W. Kubitschek's work from 1912, stating that the stone was found in Arrabona. However, as we have seen, W. Kubitschek did not mention this detail. According to the RIU the current location of the tombstone is the Kunsthistorisches Museum, Wien, and eventually the monument was listed as an "addendum" to Szöny (Brigetio). Besides the RIU, A. Mócsy also listed the inscribed monument as one from Arrabona (Mócsy 1959, 243).

As shown above, both Brigetio and Arrabona are among the stone's possible locations of origin. Then, in 1951, L. Barkóczy wrote that the stone was found among the ruins of Ács-Bumbumkút (Ad Mures) and was moved from Arrabona to rebuild the fort of Ad Mures (Barkóczy 1951, 18). But there is no clear explanation why Barkóczy had thought that the tombstone was found at the fort. Among his references we can find the work of A. Schober, and the *Corpus Inscriptionum Latinarum*, but neither of them mentioned Ács as a possible finding spot of the tombstone. The latest work mentioning the tombstone was written by D. Gabler (1968, 60), in which he repeated the opinion of L. Barkóczy about the stone's origin (Arrabona) and the location of finding (Ad Mures). There is no explanation why D. Gabler has chosen Ad Mures from all the possibilities. Except for two military diplomas (*CIL* 16, 180 and AE 1944, 102), only four inscriptions are known from Pannonia

¹³ *CIL* 03, 04368. Albanus Balvi f(ilius) / dec(urio) ala(e) Augusta(e) Ituraeo(rum) domo Betavos(!) an/nor(um) XLII stipendiorum / XX hic situs est titulum / memoriae posuerunt / Tib(erius) Iulius Reitugenus et / Lucanus dec(uriones) ala(e) Aug(ustae) / Ituraeo(rum).

¹⁴ He also said that the upper part of the stone had already been lost, even though previous researchers had seen the entire monument.

mentioning the *ala I Ituraeorum*. One is the discussed tombstone of Albanus, the origin of which is uncertain, one is known from Intercisa (RIU 1233), two from Arrabona (RIU 253 and RIU 263), and one from Sirmium (CIL 3, 10222). With all this information, there is still doubt about the origin of the tombstone, as there is no direct source or proof of its origin from Ad Mures. Moreover, as the discussed unit was garrisoned at Arrabona and the earliest descriptions of the epitaph also mention Brigetio as the location of finding, it makes these two possibilities more likely.

Another inscription,¹⁵ already mentioned above in the first chapter, is also considered to be from the fort of Ad Mures, but there is some uncertainty in this case as well. Most probably this one is from a nearby watch-tower. Since the mentioned monument is a votive altar, erected for the well-being of a quaestor and decurio of the town Mogetiana (Kovács 2003, 293), we can assume that it was secondary used either in Roman or later times (see above). R. Gyulai's description from 1887 (Gyulai 1887, 4) is well-detailed¹⁶ and it seems sure that he is referring to other ruins, not the fort, because while he mentions that the stone was found in a pine forest, the maps of his time clearly show vineyards in the vicinity of the fort (*Habsburg Empire – Cadastral maps – XIX. century*). A bit later, when R. Fröhlich described the inscription (Fröhlich 1891, 83. The CIL also used his information about the inscription.), he has already provided a little less information, as he has mentioned that the stone was found in Ács, next to the Danube (and had been transported to Komárom, where he saw it). Later, L. Barkóczi attributed the slab to the “Bumbum-kút castrum” (Barkóczi 1951, 59, no. 162), which seems to be a mistake, taking R. Gyulai's detailed description about the original finding place into consideration.

There is another inscription, unfortunately lost, which may be attributed to the area of the fort.¹⁷ The only information about this tombstone's findspot is that it was found in Ács. However, this could mean not only Ad Mures, but also a civilian settlement, the fort of Ad Statuas or even the gardens of the Esterházy-Liechtenstein-Zichy castle, where inscribed stones have been collected from over a wider area. As the inscription is lost, the CIL provides the most detailed description of the stone's findspot, mentioning that it was found in “Ács in monumento hortorum”. The named location may be identified as the mentioned castle's park, meaning that the origin of the stone is uncertain. As we cannot link the inscription to the area of Ad Mures, the troop, which is mentioned in the text, shouldn't be attributed to the fort either.¹⁸

From the territory of Bumbum-kút, recent discoveries brought seven tile stamps to light. One of them was found during the latest GPR surveys, five during the excavation in 2023, and one, which was formerly in private hands, was found during fieldwalking activities.

All the stamps found during the excavation in 2023 bore the name of the *legio X Gemina*. One of them (Fig. 3: 4; 4: 4) was found in the upper layers of the trench opened in the area of the western gate (On the location of the trenches see: Simon *et al.* 2023, 645, fig. 4). The stamp on the tile is well readable, but not intact, as its second part is missing. The remaining part of the stamp shows the letters LEG and the number X. The letter L's horizontal line is sloping downwards, while the E is not symmetrical along its horizontal axis because the upper half is wider than the lower. The details of the letter G are not clearly visible because of the mineral deposition, just as the number X. The tile itself is the fragment of a tegula. From Ad Statuas, a slightly similar tile stamp is known from the retentura, the area of the corner towers of the fort (Gabler *et al.* 1989, 142, fig. 56: 7). The dating of this stamp type is not very precise. The stamped tiles of the type are also known from a destruction layer of Ad Statuas, dated to 355 CE (Gabler *et al.* 1989, 134, 418) and from a late-Roman grave in Ad Flexum (Mosonmagyaróvár, Hungary; Lőrincz 1977, Taf. 2: 5).

¹⁵ CIL 03, 10993. [I(ovi) O(ptimo) M(aximo)] / et Iunoni Reg(inae) / pro salute / Ael(i) Rufiniani qu(a)e(storis) / dec(urionis) m(unicipii) Moget(ianae) / Ael(ius) Rufinus /]

¹⁶ ‘A Czonczó torkolata alatti sziget orrának megfelelő kis fenyves szélén, az úgynevezett <<kőbányánál>> az alapfalakból és a hely magasságából ítélve őrtorony állhatott, itt egy fogadalmi oltárt találtam.’

¹⁷ CIL 03, 11020. M(arco) Au[r]eli[o] M(arci) [f(ilio)] / Lu[ca]no(?) vet(erano) ex dec(urione) a[l(ae)] / III Th[r]ac(um) S[e]v[er]ianae[t].

¹⁸ Moreover, there is a lot of uncertainty about the inscription. In line 1, the editors of the CIL reconstructed the name as Marcus Aurelius Lucanus. Marcus and Lucanus seems to be correct, but the drawing in CIL shows longer empty spaces between the letters AV – E(?) – LI to reconstruct the name to Aurelius. However, there is no proof that the drawing is proportional. If it is not, then Aurelius could be a possible solution. The problem is quite similar regarding line 3. The drawing shows three shortening vertical lines. We cannot be sure if these were really shortening, or the inscription was damaged at that point. If the stone was damaged, then it seems more safe not to guess the troop's name and number, only its Severiana ‘title’ seems to be certain. However, the editors of the CIL have provided probably the best solution, by attributing the inscription to the mentioned *ala III Thracum sagittariorum*, which was stationed in the fort of Azaum, right next to Brigetio.



Fig. 3. Drawing of the recently discovered tile stamps from Ad Mures. Without scale (drawing B. Simon).

The other four tile stamps, which also belonged to the *legio X Gemina*, were found at the same location, in the north-western corner tower's destruction layer (Simon *et al.* 2023, 650–652).¹⁹ Based on the fact that no other troop stamps were found in the fort, at the present state of research it can be assumed that at least one important construction project was carried out with the intervention of the *legio X Gemina*. This legion was not mentioned in B. Lőrincz's work in connection with Ad Mures (Lőrincz 1981, 95. Here he listed stamps of the *legio XIII Gemina*, and with uncertain findspot a stamp of the *legio I Adiutrix* and probably one of the *cohors I Ulpia Pannoniorum*). One of the tiles (Fig. 3: 5; 4: 5) has a backwards written stamp. It is not intact, as both its end and its beginning are missing. But luckily, its most characteristic part, the last two letters of LEG, the dot next to the X, and the upside P are well visible. A similar one was found at Ad Statuas (Gabler *et al.* 1989, 419, 420, fig. 60/5, Kat. No. 139) and the variation of this type is also known from Vindobona and Arrabona (Lőrincz 1981, 21, Taf. 3: 1). However, the type's dating is not so precise, as such stamped tiles were used during the 2nd–4th centuries CE.

The other three stamps were of the same type (Fig. 3: 1–3; 4: 1–3). One of them was fully preserved, but in the other two cases, only the second part of the stamp was found. These stamps had rounded ends on both sides. The letters appeared as LEGXGEPF and were well readable ones. The horizontal part of L is a bit short, there is a wide space between the Gs and the X, and the upper horizontal line of F is longer than the other and goes upwards. A stamp from Gerulata seems to provide a perfect analogy (Kraskovská 1991, 57, fig. 3: 5). Quite

¹⁹ Although the tiles were registered in different stratigraphic units, by elaborating the stratigraphy, it seems sure that all the layers were parts of the same destruction layer.

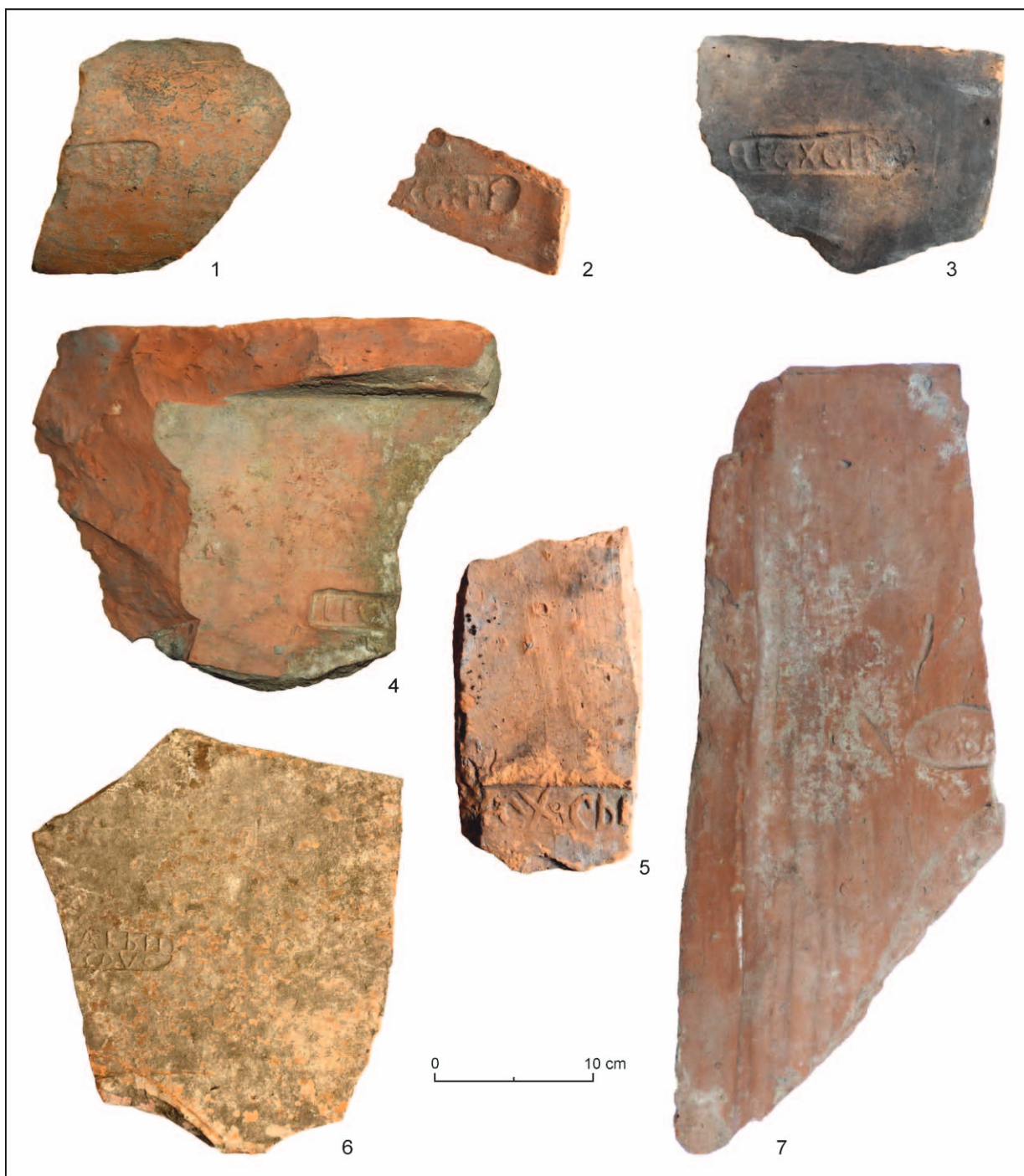


Fig. 4. Photo montage of the recently discovered stamped tiles from Ad Mures (photos I. Koós, M. Szabó, B. Simon; graphic design B. Simon).

similar stamps were found during earlier fieldwalkings (Lóki/Szabó/Visy 2011, 61) in Ad Mures and from the area of Ad Statuas (Gabler *et al.* 1989, fig. 62: 1, Kat. No. 164), but because of the fragmented form of our stamps it is not sure that all of them belonged to exactly the same type. However, the slightly rounded frame, the inscribed text, and the form of letter F look similar. Unfortunately, their dating is roughly the same as our earlier example (Gabler *et al.* 1989, 420), with a wide time frame of two centuries.

There are two other stamps, which were found during on-site surveys. The first one belonged to the *cohors I Aelia milliaria sagittariorum* (Fig. 3: 7; 4: 7) and was found on a fieldwalking. This cohort was also attested in Ad

Statuas, but the stamp is definitely not the same. The stamp from Ad Mures seems to belong to the 4th category of B. Lőrincz, which could be dated to the 4th century CE (Lőrincz 1981, 31). The stamp is fragmented, just as the last five letters survived, and the text is written backwards. The G at the end of the stamp looks like the other ones belonging to this cohort, but the A is a bit different. In most cases, the A has a horizontal line in the middle, but this type has an A without it. The E, L, S are similar in all types.

The other stamp, which was found during one of our GPR surveys, can be well dated (Fig. 3: 6; 4: 6). The stamp has two lines, in which the *legio II Italica* together with *Ursicinus dux* is named. The tile must have been produced under the time of *Ursicinus dux*, probably between 368–371 CE (Kovács 2018, 92). *Ursicinus dux* was the governor of Noricum and Pannonia I (earlier Pannonia Superior), but the tiles bearing his name were also transferred as far as to Pannonia Inferior (Szilágyi 1933, 36). This type is also known from Carnuntum, Vindobona and Gerulata (Kraskovská 1991, fig. 8: 10–14) there is also one possible example for this type from Brigetio, but as J. Szilágyi stated, it is fragmentary and hardly readable (Szilágyi 1933, 38).

A more detailed picture can be obtained by comparing the new finds in Ad Mures with information from earlier literature. Most of the stamps of the *legio X Gemina* were found in a destruction layer, which means that the tiles for the construction works in Ad Mures were supplied by this legion. However, B. Lőrincz in his summary work did not record the occurrence of the *legio X Gemina*'s stamped tiles in the vicinity of Ad Mures (Lőrincz 1981, 18). Similarly, J. Szilágyi listed Arrabona, Brigetio and Kelamantia as findspots of the legion's tilestamps, but Ad Mures and Ad Statuas were not among them (Szilágyi 1933, 50–63). From the vicinity of Ács, he mentioned only the stamps of the *legio XIII Gemina*, *XIII Gemina* and *XV Apollinaris* and stamps of vexillationes (VEXIL TRES and VEXILLATIO III; Szilágyi 1952, 203). As no such stamps were found in the small areas excavated in 1989 and 2023, we cannot say whether these troops are related to Ad Mures or not. It is important to point out that the stamps of the two main legions that built the nearby legionary fortress of Brigetio, the *legio I Adiutrix* and the *legio XI Claudia*, are completely missing from Ad Mures.

The excavations of the nearby fort of Ad Statuas have brought a higher number of stamped tiles to light. Based on the stamped tiles, D. Gabler concluded that after 214 CE Ad Statuas was subjected to Carnuntum and not to Brigetio, because the stamps of the *legio I Adiutrix* were missing from the site.²⁰ As we have seen the same in the case of Ad Mures, we can assume that this fortress was also under the military administration of Carnuntum, or at least of Pannonia Superior after the border reform. The stamped tile of the *cohors I Aelia sagittariorum* also confirms this hypothesis. The stamps of this troop are known from Quadrata and Arrabona from the 4th century CE (Lőrincz 1981, 31), which again leads to the observation that Ad Mures was administratively linked to other forts and fortifications in Pannonia Superior (= Pannonia I) in the Late Roman period. The importance of these observations is that they revise the statements of D. Gabler, and they seem to affirm the assumption of P. Kovács (Kovács 2003, 293), who places the border of the provinces east of Ad Mures. D. Gabler observed, that on the two Pannonias' northern limes, from Carnuntum to Brigetio, the stamps of Brigetio's legion were entirely missing, except for Ad Mures, and therefore assumed that the post-214 CE boundary was between Ad Statuas and Ad Mures (Gabler 1977, 309; Gabler et al. 1989, 653). Unfortunately, D. Gabler did not publish any finds that would confirm that he had authentic information about the legion's stamped tiles from Ad Mures. On the contrary, B. Lőrincz reported in his opponent review of the doctoral dissertation of P. Kovács that only stamped tiles of units belonging to Pannonia Superior were found on the excavation in 1989.²¹

The tile stamps of Brigetio are not yet fully published, but according to the literature, the *legio X Gemina* has only four occurrences from the settlement complex, all of which are fragmentary and/or not well legible (Szilágyi 1933, 48–60). The presence of these stamps does not weaken the previous argument, since Brigetio was part of Pannonia Superior before 214 CE, so the supply of these tiles could have taken place before then. In summary, however, the meagre number of stamped tiles does not seem to support that the legion of Vindobona supplied Brigetio with large quantities of roof tiles in any period of Roman times.

²⁰ Only one piece was found as a stray find in the Danube, so statistically this has no meaning (Gabler et al. 1989, 653).

²¹ Despite our efforts, in the Kuny Domokos Museum (Tata, Komárom-Esztergom County), where all the other archaeological material is kept, we have not been able to find the stamped tiles that B. Lőrincz probably saw. However, his observations are in line with the results of the excavation in 2023.

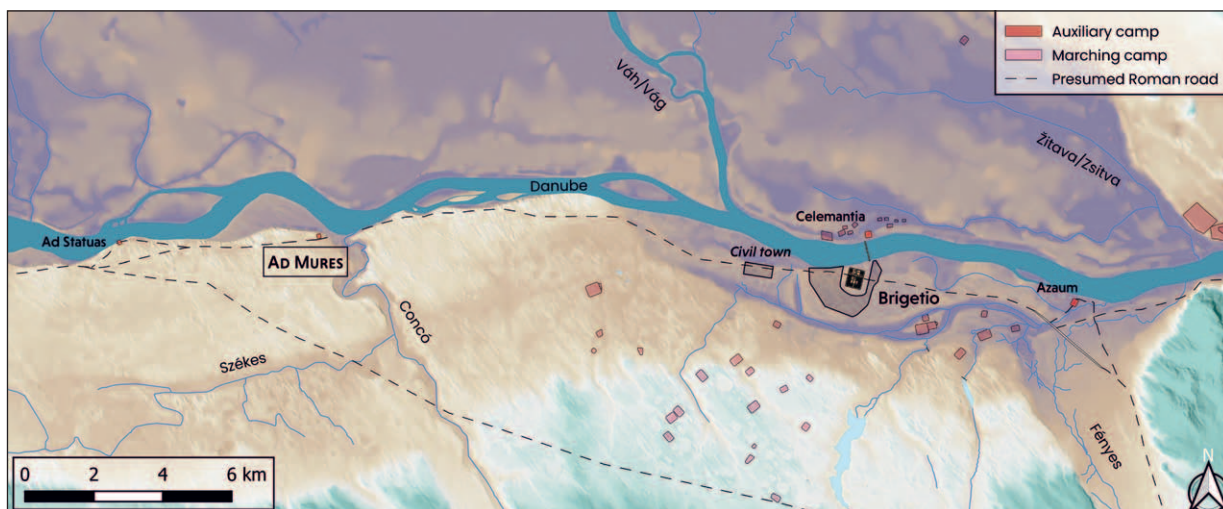


Fig. 5. Map of the limes section between Ad Statuas and Azaum (map B. Simon).

TOPOGRAPHY OF THE LOCATION AND THE QUESTION OF THE PANNONIAN BORDER

The Roman auxiliary fort of Ad Mures (Ács-Bumbumkút) is located on the lowest alluvial terrace of the Győr–Tata terrace region, on a bluff of the Danube, 1 km west of the estuary of the Concó Stream. The neighbouring military camps are the fort of Ad Statuas (Ács-Vaspuszta), less than 6 km to the west, and the legionary fortress of Brigetio (Komárom-Szöny), 15.5 km to the east (Fig. 5). As presented above, despite the meagre data, the history and the dimensions of the neighbouring auxiliary forts seem to be quite similar. This is especially true in case of the late stone phase of the forts, which produced not only archaeological, but epigraphic parallels. From the 2nd century CE onwards, the auxiliary forts appear to have been regularly spaced at a distance of about 15–25 km along the northern Pannonian ripa – only Ad Statuas and Ad Mures deviate from this pattern.²² What could have been the importance of this location that two garrisons were stationed here at the same time? We have demonstrated the close epigraphic and archaeological parallels of the two forts and this, probably more than geographic closeness is also emphasised in the *Itinerarium Antonini*, where they are mentioned together between Brigetio and Arrabona *in medio* (*Itin. Ant.* 1848, 246, 5, 6).

Ad Statuas and Ad Mures control a frontier region, the natural borders of which extend from the Cuhai-Bakony Stream to the Concó Stream from east to west, and from the Danube to the Székes Stream in the south. The area is dominated by the alluvial dunes of the Danube, and it is not rich in fresh surface waters (Dövényi 2010, 335, 336), except for the mentioned streams and the marshes in their valleys. There is no direct data regarding the natural environment in the Roman Period, but there is no reason to doubt that the valley of the Concó Stream was also a significant natural barrier in those times. The Concó has one of the most extensive water catchment areas besides the Rába (Raab) and the Cuhai-Bakony Stream on the ripa from Arrabona (Győr, Győr-Moson-Sopron County, Hungary) to Aquincum (Óbuda, Budapest, Hungary) and its valley also cuts deep around its lower course (Fig. 4; 7; VKKI 2010, 2, 3). At its estuary the stream's valley spreads out meandering, creating a broad water body, which is difficult to cross (this is emphasised on the Second Military Survey of the Habsburg Empire). Accounts from the 19th century also highlight how strong and dangerous in spring the stream and the ice can be (Gyulai 1886), but floods during summer are also typical (VKKI 2010, 6).

It is probably because of these strategic advantages, that along the eastern bank of the Concó Stream a chain of fortifications was erected against the French forces during the Napoleonic Wars in 1809 (Nováki/

²² The fort of Azaum for its closeness to the legionary fortress of Brigetio could also be counted as an exception, although it was established in order to be the bridgehead of the 'Brigetio island' (Viczián et al. 2013).



Fig. 6. The crop-mark of the Roman road in the direct neighbourhood of Ad Mures on a satellite image taken 20. 03. 2020 (Google Earth, Image © 2023 Maxar Technologies, graphic design B. Simon).

Tolnai 2010). The redoubts were placed on the high ground for the sake of a good firing position for the artillery. This only highlights that getting through the stream was not easy: on one side a low, marshy, at some places broad, watery land, then a quite steep slope was to be crossed.

Because of these difficulties, some roads passed through the stream further from the estuary. Regarding the oldest maps from the 18th century (*HU-MNL-OL-S 91-6*; *HU-MNL-OL-S 91-7* – year 1764), one postal road crossed the Concó near the estuary, one postal road where the stream has a west meander, and one road crossed not far from the confluence of the Székes and the Concó. The Roman road system around Ács cannot be reconstructed with certainty, as there is no definite data regarding their age, but similar considerations as in the Modern period have led to their evolution. The main difference is that a branch of the *limes* road crossed the Concó just around the estuary, and led to the southern gate of *Ad Mures*, then further to the west. The road is clearly visible on archival aerial photographs and also satellite images (Fig. 6; *Visy 2003*, fig. 27; *Map Collection of the Institute and Museum of Military History: HI69394*) but could not be detected with a magnetometer survey in 2022. The reason for the latter is probably a geological issue that needs further investigation. The road's course highlights that the local topography around the river confluence was different in the Roman period and that the Danube has probably heavily eroded the area (*Visy 2003*, 26; on the Danube's erosion and building activity around the site see: *Ádám 2020*, 48–50). The road in question was probably the main one leading from Ad Statuas to Brigetio, as more watchtowers were identified along its course, on both sides of the Concó (Fig. 7).

However, another road was originally dated to the Roman period based on aerial archaeological data (*Map Collection of the Institute and Museum of Military History: HI9724, HI9727*; *Visy 2003*, 27, fig. 26; generally on local roads see: *Visy 2003*, 25–27). This road branches off the *limes* road near Ad Statuas, it takes a turn to the southeast, and crosses the Concó somewhere near present-day Ács and heads towards Tata. If it was indeed a Roman road, then it was a shortcut from the *limes* road to the Savaria-Aquincum road (*Bödőcs 2008*, 352, 354, 355), bypassing Brigetio from the south. It is noteworthy, that according to earlier maps, the northern section of this road was the postal road between Gönyű and Ács in 1805 (*HU-MNL-OL-S 12-XIII.-351*), proving its historic origin. Unfortunately the Concó crossing and the middle section cannot be reconstructed, but the southern section from Csémpusztá to Tata can be traced on historic maps (e.g. First and Second Military Survey of the Habsburg Empire).

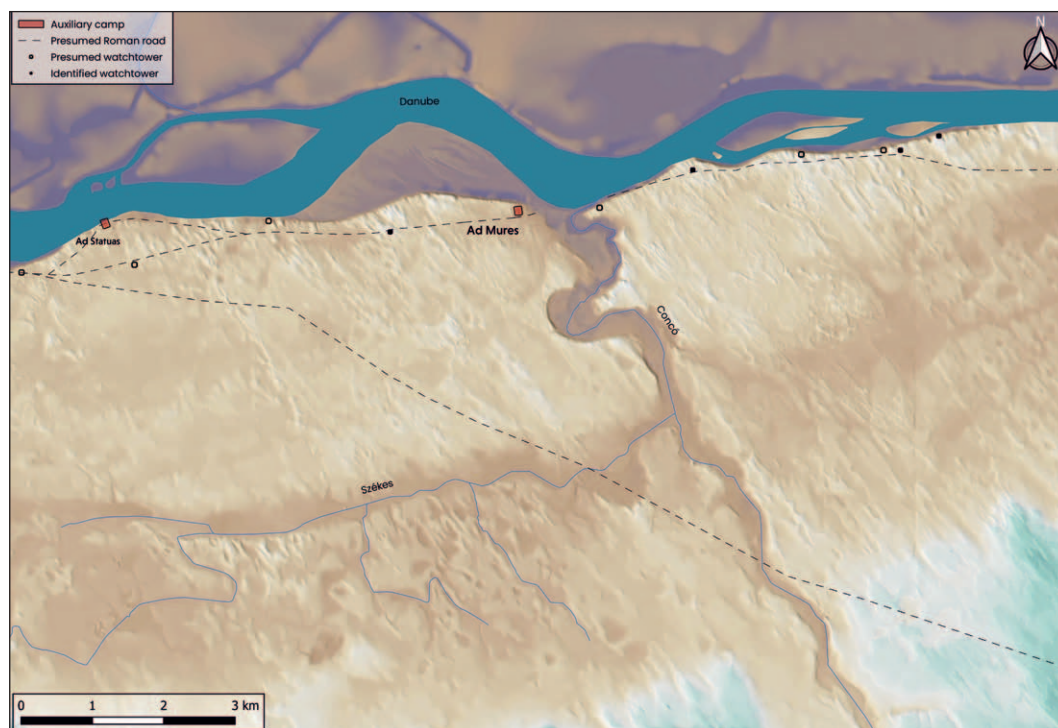


Fig. 7. Map of the limes in the neighbourhood of Ad Statuas and Ad Mures (map B. Simon).

We stressed that it was more advantageous to fortify the eastern bank of the Concó, however the auxiliary forts were placed directly on the Danube. The possible reason for this is that these encampments were primarily responsible for controlling and protecting the main east-west road and especially the riverbank (Sommer 2009), not safeguarding the line of the stream. Therefore, we need to pay attention to the area on the northern side of the forts, where geographical topography helps again in assessing the strategic situation. It has been stated on many occasions that the hinterland of Brigetio between the Váh/Vág and the Žitava/Zsitva was a military gathering area during the Marcomannic Wars (Komoróczy *et al.* 2020, 174–202) and that the northern area of the Quadi could be reached from this direction. However, west of the Váh/Vág extends the largest island of the Danube: the Veľký Žitný ostrov (Csallóköz/Große Schüttinsel), which, just like the southern Szigetköz (Malý Žitný ostrov/Kleine Schüttinsel) can only be traversed along the highest lying area in the middle (Bátky 1918, 331–335; HU-MNL-OL-S 12-X.-54). At the western end of the Veľký Žitný ostrov is the area around Bratislava, while on the eastern end is Komárno (Nitra Region, Slovakia). Local topography, the map of the Second Military Survey (Col. XXVII. Sec. 48, Col. XXVIII. Sec. 48) certain road maps (HU-MNL-OL-S 101-164) and the elevation map of the area (cf. Fig. 5) prove, that the dry areas were narrower between Nová Stráž (Örsújfalu) and Komárno, while broader from the area of Zlatná na Ostrove (Csallóköz-aranyos). This is where the Modern and contemporary main road turns northwest, to cross the island. Although the Germanic settlement network of the island is poorly studied, except for the settlement in Veľký Meder (Nitra Region, Slovakia; Varsík 2003), the geography of the region strongly suggests, that this was also the main route along the island in the Roman era (cf. Krekovič 1981, 369, fig. 22).

Although the question of Roman fords or crossings, or harbours on this section of the Danube hasn't been studied, it seems important that the riverbank between Ad Statuas and Ad Mures faced the broadest tip of the island. This area was logically the one, through which the Romans could interact best with the Germanic population of the island, as it probably took longer and harder first to cross the Danube around Brigetio (on a bridge) and then the Váh/Vág around Komárno. Therefore, one must assume that there was some kind of access over the Danube, possibly a ferry (or a bridge), which can also be historically attested from the 19th century (HU-MNL-OL-S 12-XIX.-44). The Germanic settlements' connection with this region is also attested through the imported provincial Roman pottery, especially Pannonian grey ware (Varsík

2005, 284). The proportion of imported pottery also shows a more prosperous commercial activity between the 2nd–4th century CE, compared to the western regions of the Quadi (*Varsik* 2005, 284, 291, Abb. 6).

The regional and local topography as well as the archaeological data highlight the strategic importance of the northern frontier between Ad Statuas and Ad Mures, which leads to the question about the border between Pannonia Superior and Pannonia Inferior. From the whole territory of Ad Statuas, only one tile came to light out of 200, which bore the stamp of a unit from the territory of Pannonia Inferior after Caracalla, namely the *legio I Adiutrix* (Gabler *et al.* 1989, No. 138, 163, 207). Since this tile was found somewhere in the Danube, perhaps this has led D. Gabler to assume that the border between the two provinces was east of Ad Statuas (see above). We already mentioned that according to B. Lőrincz's account, P. Kovács also suggested that the border was even east of Ad Mures, therefore the only possible candidate as a border here is the Concó Stream, because Brigetio was undoubtedly already in Pannonia Inferior.

The new epigraphic material collected for this publication also corroborates that Ad Mures was in Pannonia Superior after Caracalla's revision, and the presented topographic study gives reasons why the Concó became the border. However, this has multiple historic implications, which needs to be briefly addressed. If Ad Mures was a Roman fort in Pannonia Superior after the border revision, then the Concó was originally not a border of provinces, but the border of two tribal territories (Boii and Azali), then of two municipal territories (Mursella, Mogionibus; Kovács 2003). This also suggests that the forts were originally not established to watch and guard a border within the Roman Empire, as tribal territories have existed already before them, but were placed against the people of the opposite bank of the Danube.

Besides these implications, the late Roman troop and garrison history and the names of the forts also need to be reconsidered. The stamped tiles of the *legio II Italica* and *Ursicinus dux*, and the ones of the *legio X Gemina* from the destruction layer of the fan-shaped tower affirm, that the province border did not change here after the division of the Pannonias during Diocletian; Ad Statuas and Ad Mures became (or remained) the garrisons of Pannonia Prima.

The problem is that the names of the forts are not listed in the Notitia Dignitatum, but it does identify three previously unmentioned places, Quadriburgium (*Not. dign. occ.* 1876, XXXIV, 17), Ad Herculem (*Not. dign. occ.* 1876, XXXIV, 20) and Arrianis (*Not. dign. occ.* 1876, XXXIV, 29) and the *tribunus gentis Marcomannorum* without naming the location (*Not. dign. occ.* 1876, XXXIV, 24). Based on the excavation results of D. Gabler, T. Nagy believed that the fort of Ad Statuas has to be the garrison of the *gens Marcomannorum* (Nagy 1984). He based his argument on the Valentinian finds and absence of the location's name (Nagy 1984, 116, 117). However, it seems more logical to accept that instead of Ad Statuas, the fortress of Keszthely-Fenekpuszta was the station of the *tribunus*. The idea originates from S. Soproni (Soproni 1978, 176), but Á. Szabó provided new insights and arguments to support it (Szabó 2022, 13–16). He highlights that each inner fortifications of Valeria (and Pannonia I) were probably governed by a *tribunus cohortis*, who were entrusted with special tasks in the province hinterland and the *tribunus gentis Marcomannorum* could have also been such a military officer. The archaeological data is also in line with this theory (Szabó 2022, 16).

Two other tribunes are named from Pannonia I, the *tribunus cohortis Caratensis* (*Not. dign. occ.* 1876, XXXIV, 30) and the *tribunus cohortis Arrianis* (*Not. dign. occ.* 1876, XXXIV, 29). It is now communis opinio, that the first one names Scarbantia (Soproni 1978, 146), but the identification of the latter is still problematic. B. Lőrincz among others suggested that Arrianis could have been the name of the fort located in Klosterneuburg (Lőrincz 1980, 268, 269; Ubl 1975, 152), which E. Tóth tried to refute (Tóth 1981). Although the name of the fort of Klosterneuburg is not mentioned in the itineraries, its 2nd–4th century garrisoning unit, the *cohors I Aelia sagittariorum* is well known (Spaul 2000, 480–482). Like the *cohors VII Breucorum* in Pannonia Inferior (Lőrincz 1977, 17–20), this unit was also specialised in tile production (Lőrincz 1980, 268), which were used throughout the northern Pannonian ripa (Mosser *et al.* 2010, 850, 851, Tab. 615). From this perspective, it is noteworthy that an archaeometric study proved a similarity between the material of the tiles with the stamp of the unit and one type of the late Roman OFARN- group (Mosser *et al.* 2010, 851). The latter stamped tiles are scattered around the same area as the tiles of the *legio X Gemina*, but also come from Roman built structures on Barbarian territory (e.g. Göd-Bócsaújtelep; Mosser *et al.* 2010, 852, Tab. 619). The possible readings of this group were recently published again and it is possible that the stamps name Arrianis, i.e. the fort of Klosterneuburg in an abbreviated form (Lehenbauer *et al.* 2021). It would make sense that the special task of the *tribunus cohortis* at Arrianis was to supply tiles for the military construction works, which is in continuation with the task of the *cohors I Aelia sagittariorum*. It is also noteworthy that some tiles with the

stamp ARRIANIS are known from the same northwestern area of Pannonia I (Lőrincz 1981, 52; Tóth 1981, 225).²³

The last two unidentified places are mentioned just like the other forts, where cavalry units were garrisoned (*Not. dign. occ.* 1876, XXXIV, 16, 18, 19, 21–23). But can Quadriburgium and Ad Herculem be identified with Ad Statuas and Ad Mures? It is known from Valeria that some fort names were changed during the late Roman period for some reason, especially because of their pejorative or pessimistic meaning (Mócsy 1965). The same could have happened in the case of Ad Mures, as the name is derived from *mūs*, *mūris m.*, mouse (on the antique reception of mice see: Carroll 2015, 57–68). As in antiquity mice were also connected to pestilence and the underworld (Carroll 2015, 58, 64), it seems to be logical that the fort of Ács-Bumbumkút was renamed after the mighty, Cerberus-defeating Hercules after the 280's CE, when the *Itinerarium Antonini* was composed (Tóth 1982, 57). The name could have been given already at the time of the tetrarchy referring to the divine ancestry of Maximianus. The renaming may have coincided with the major building works, during which the corner towers of the fort were erected (cf. Ad Statuas: Gabler *et al.* 1989, 74–80).

It is still not clear why the name of Ad Statuas was changed, but it seems less likely that Quadriburgium would be the name of an undiscovered late Roman fort in Pannonia I. The possible explanation is that the fort was so badly damaged during the attacks of the Quadi between 355–358 CE (on the reconstruction of the events see: Kovács 2016), when one of the corner towers was destroyed (Gabler 1972), that it needed to be re-established and was given a new name – Quadriburgium. Such a major rebuilding phase is attested in the southern part of the fort, where the foundations of a building do not match the walls of the earlier (before 354 CE) periods (Gabler 2009, 138, 139; Gabler *et al.* 1989, 95, 103).²⁴

According to the above, it is possible that a unit of *equites sagittarii* were garrisoned in Ad Statuas = Quadriburgium and a unit of *equites Dalmatae* in Ad Mures = Ad Herculem, around the turn of the 4th–5th century CE. This way Quadriburgium and Ad Herculem were the last two easternmost forts along the ripa of Pannonia I.

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BIBLIOGRAPHY

- | | |
|---------------|--|
| Barkóczi 1951 | L. Barkóczi: <i>Brigetio</i> . Dissertationes Pannonicae Ser. II/22. Budapest 1951. |
| Bátky 1918 | Zs. Bátky: Néhány vonás Csallóköz település-földrajzához. <i>Földrajzi Közlemények</i> 46, 1918, 327–341. |
| Carroll 2015 | G. Carroll: <i>Mouse</i> . London 2015. |
| CIL | <i>Corpus Inscriptionum Latinarum</i> . Berlin 1863. |
| Dövényi 2010 | Z. Dövényi: <i>Magyarország kistájainak katasztere</i> 1. Budapest 2010. |
| Fröhlich 1887 | R. Fröhlich: Ó-Szőnyi régiségekről. <i>Archaeológiai Értesítő</i> 7, 1887, 162, 163. |
| Fröhlich 1891 | R. Fröhlich: Römische Inschriften aus Pannonia inferior und superior. <i>Archäologisch-epigraphische Mitteilungen aus Österreich-Ungarn</i> 14, 1891, 50–83. |
| Gabler 1968 | D. Gabler: Arrabona és környékének köplasztikai emlékei. <i>Arrabona</i> 10, 1968, 51–78. |
| Gabler 1972 | D. Gabler: Későrómai éremlelet Ács-Vaspusztáról. <i>Archaeológiai Értesítő</i> 99, 1972, 232–239. |
| Gabler 1976 | D. Gabler: Ad Mures. In: J. Fitz (ed.): <i>Der römische Limes in Ungarn</i> . Taschenbuch für die Teilnehmer des 11. Internationalen Limeskongresses. Szent István Király Múzeum közleményei. A sorozat 22. Székesfehérvár 1976, 29. |

²³ However, the same situation does not always apply to stamped tiles with a place name, since, for example the late Roman Quadriburgium tiles were probably produced near Esztergom (Komárom-Esztergom County, Hungary), the fort Solva (Kelemen 2011). It seems important to launch new archaeometric studies which could identify where the Arrianis-type stamped tiles were produced.

²⁴ Despite the same place name, our view is the same as M. H. Kelemen's that the stamped tiles bearing the QVADRI B inscriptions cannot be directly connected with Ad Statuas, but rather with the area of Esztergom. However, the type of the stamp, which was discovered on a tile from Ad Statuas, has so far only been found outside Solva, i.e. in Intercisa (Dunaújváros) and Annamátia (Baracs; Kelemen 2011, 145, 154).

- Gabler 1977 D. Gabler: Untersuchungen am oberpannonischen Donaulimes. In: D. Haupt/H. G. Horn (eds.): *Studien zu den Militärgrenzen Roms II. Vorträge des 10. Internationalen Limeskongresses in der Germania Inferior. International Congress of Roman Frontier Studies (10th: 1974: Cologne, Germany)*. Beihefte der Bonner Jahrbücher 38. Bonn 1977, 297–312.
- Gabler 2009 D. Gabler: Római castellum Ács-Vaspusztán. In: Sz. Biró/A. Molnár (eds.): *Fogadó a határon. Római kori útállomás Gönyűn. Kiállításvezető*. Győr-Moson-Sopron Megyei Múzeumok Kiállításvezetője 4. Győr 2009, 125–146.
- Gabler et al. 1989 D. Gabler/L. Bartosiewicz/A. Choyke/B. Lőrincz/K. Ottományi/ K. Szabó: *The Roman Fort at Ács-Vaspuszta (Hungary) on the Danubian limes*. BAR International Series 531 (i–ii). Oxford 1989.
- Gerecsei/Lakatos 2015 Zs. Gerecsei/B. Lakatos: Ács, a mi városunk. Ács 2015.
- Graf 1936 A. Graf: Übersicht der antiken Geographie von Pannonien. Dissertationes Pannonicae Ser. 1, 5. Budapest 1936.
- Gyulai 1886 R. Gyulai: Archeologiai sétá Ács felé. *Komáromi Lapok* 7/50, 1886.
- Gyulai 1887 R. Gyulai: Adalék megyénk római hódoltsága korához. *A Komárom-Vármegyei és Komárom Városi Történeti és Régészeti Egylet jelentése* 1, 1887, 1–10.
- Hofmann 1905 H. Hofmann: *Römische Militärgrabsteine der Donauländer*. Wien 1905.
- Kelemen 2011 M. H. Kelemen: Késő római tégláégető kemence Esztergomból. *Archaeologiai Értesítő* 136, 2011, 135–163.
DOI: <https://doi.org/10.1556/archert.136.2011.6>
- Komoróczy et al. 2020 B. Komoróczy/J. Rajtár/M. Vlach/C.-M. Hüssen: A companion to the archaeological sources of Roman military interventions into the Germanic territory north of the Danube during the Marcomannic Wars. In: M. Erdrich/B. Komoróczy/P. Madejski/M. Vlach (eds.): *Marcomannic Wars and Antonine Plague. Selected essays on two disasters that shook the Roman World*. Brno – Lublin 2020, 173–298.
- Kovács 2003 P. Kovács: Mogetiana und sein Territorium. In: Á. Szabó/E. Tóth (eds.): *Pannonica Provincialia ez archaeologia. Studia sollemnia auctorum Hungarorum Eugenio Fitz octogenario dedicata*. Libelli archaeologici. Ser. nova 1. Budapest 2003, 277–306.
- Kovács 2016 P. Kovács: The literary sources of Constantius II's war against the Sarmatians. In: R. Ardevan/E. Beu-Dachin (eds.): *Mensa rotunda epigraphica Napocensis*. Cluj-Napoca 2016, 161–192.
- Kovács 2018 P. Kovács: Pannonia története Kr. u. 374–378 között. In: P. Forisek/Á. Szabó/J. Szakács (eds.): "Hadak útján". *A népvándorlaskor fiatal kutatóinak XXVII. konferenciája*. Debrecen, 2017. október 27–28. Debrecen 2018, 85–127.
- Kraskovská 1991 L. Kraskovská: Kolkované rímske tehly z polohy Bergl v Bratislave-Rusovciach. *Zborník SNM* 85. *Archeológia* 1, 1991, 49–68.
- Krekovič 1981 E. Krekovič 1981: Rímska importovaná keramika na Slovensku. *Slovenská archeológia* 29, 1981, 341–376.
- Kubitschek 1912 W. Kubitschek: Das Lapidarium des Hieronymus Beck von Leopoldsdorf. In: *Jahrbuch für Altertumskunde* 6, 1912, 103–147.
- Lehenbauer et al. 2021 H. Lehenbauer: Die norischen Auxiliärtruppen als Ziegel schlagender Verband am Donaulimes? *EDCS-J* 14, 2021.
DOI: <https://doi.org/10.36204/edcsj-014-202109>
- Lóki/Szabó/Visy 2011 R. Lóki/M. Szabó/Zs. Visy: A PTE kutatócsoportja által felmért lelőhelyek katalógusa. In: Zs. Visy (ed): *A Danube limes program régészeti kutatásai 2008–2011 között*. Pécs 2011, 53–169.
- Lőrincz 1977 B. Lőrincz: *Pannonische Ziegelstempel I. Limes-strecke Annamatia – Ad Statuas*. Dissertationes Archaeologicae 2/5. Budapest 1977.
DOI: <https://doi.org/10.17204/dissarch.1977.1>
- Lőrincz 1980 B. Lőrincz: A mosonmagyaróvári Hansági Múzeum bélyeges téglái. *Alba Regia* 18, 1977/1978, 1980, 265–289.
- Lőrincz 1981 B. Lőrincz: *Pannonische Ziegelstempel III. Limes-strecke Ad Flexum – Ad Mures*. Dissertationes Archaeologicae 2/9. Budapest 1981.
DOI: <https://doi.org/10.17204/dissarch.1981.1>
- Lovas 1937 E. Lovas: A győrvidéki régészeti kutatás és gyűjtés története. *Győri Szemle* 8, 1937, 1–19.
- Mócsy 1959 A. Mócsy: *Die Bevölkerung von Pannonien bis zu den Markomannenkriegen*. Budapest 1959.
- Mócsy 1965 A. Mócsy: Későrómai helynévváltoztatások a Duna-vidéken. *Antik Tanulmányok* 12, 1965, 103–105.
- Mosser et al. 2010 M. Mosser/K. Adler-Wölfl/M. Binder/R. Chinelli/W. Chmelar/S. Czeika/G. Dembski/S. Grupe/K. Gschwantler/E. Hejl/S. Jäger-Wersonig/C. Jawecki/G. Kieweg-Vetters/

- C. Litschauer/C. Öllerer/S. Sakl-Oberthaler/K. Tarcsay/R. Wedenig: *Die römischen Kasernen im Legionslager Vindobona. Die Ausgrabungen am Judenplatz in Wien in den Jahren 1995–1998. Band 1.* Monografien der Stadtarchäologie Wien 5. Wien 2010.
- Nagy 1984 T. Nagy: Die gens Marcomannorum in Pannonia Prima. Antaeus. *Mitteilungen des Archäologischen Instituts der Ungarischen Akademie der Wissenschaften* 12–13, 1982–1983, 1984, 113–122.
- Nováki/Tolnai 2010 Gy. Nováki/G. Tolnai: Napóleon-kori sáncerdők Ács és Nagyigmánd térségében. *Castrum* 12, 2010, 71–102.
- Petényi 2003 S. Petényi: Ad Mures castellum. In: Zs. Visy (ed.): *The Roman Army in Pannonia. An Archaeological Guide of the Ripa Pannonica*. Budapest 2003, 72–74.
- RHP 2001 B. Lőrincz: *Die römischen Hilfstruppen in Pannonien während der Prinzipatszeit*. Wien 2001.
- Schober 1923 A. Schober: *Die Römischen Grabsteine von Noricum und Pannonien*. Sonderschriften des Oesterreichischen archäologischen Institutes in Wien 10. Wien 1923.
- Simon et al. 2023 B. Simon/L. Borhy/D. Bartus/R. H. Olasz/M. Szabó/Á. Müller/M. Peng/Z. Czajlik/D. Hümpfner: *The fort of Ad Mures (Ács, Komárom-Esztergom County, Hungary). New investigations on the northern section of the ripa Pannonica*. *Dissertationes Archaeologicae* 3/11. Budapest 2023, 641–653.
DOI: <https://doi.org/10.17204/dissarch.2023.641>
- Sommer 2009 C. S. Sommer: Why there? The positioning of forts along the riverine frontiers of the Roman Empire. In: W. Hanson (ed.): *The army and frontiers of Rome. Papers offered to David J. Breeze*. *Journal of Roman Archaeology. Supplementum* 74. Portsmouth – Rhode Island 2009, 103–114.
- Soproni 1978 S. Soproni: *Der spätromischen Limes zwischen Esztergom und Szentendre. Das Verteidigungssystem der Provinz Valeria im 4. Jahrhundert*. Budapest 1978.
DOI: <https://doi.org/10.11588/bjb.1983.0.70032>
- Spaul 2000 J. E. H. Spaul: *Cohors 2: The Evidence for and a Short History of the Auxiliary Infantry Units of the Imperial Roman Army*. BAR International Series 841. Oxford 2000.
- Szabó 2022 Á. Szabó: Militäranlagen im Hinterland von Valeria und die Spolien der Innenbefestigungen. In: O. Heinrich-Tamáska (Hrsg.): *Castra et Villae in der Spätantike. Fallbeispiele von Pannonien bis zum Schwarzen Meer*. *Castellum Pannonicum Pelsonense* 8. Leipzig – Budapest – Keszthely – Rahden/Westf. 2022, 9–36.
- Szilágyi 1933 J. Szilágyi: *A pannoniai bélyeges téglák*. *Inscriptiones tegularum Pannonicarum*. *Dissertationes Pannonicae* 2/1. Budapest 1933.
- Szilágyi 1952 J. Szilágyi: Roman Garrisons stationed at the Northern Pannonian-Quad Frontier-Sectors of the Roman Empire. *Acta Archaeologica* 2, 1952, 189–222.
- Sztachovics 1874 R. Sztachovics: A megyében talált római emlékek. In: I. Fehér/K. Kruesz (eds.): *Győr megye és város egyetemes leírása*. Budapest 1874, 377–385.
- Tóth 1981 E. Tóth: Vítás kérdések Pannonia 4. századi történetében. 2. Arrianis (ND OCC XXXIV 29). *Antik Tanulmányok* 28, 1981, 219–229.
- Tóth 1982 E. Tóth: Tetrarchia-kori Iovia-Herculia helynévadás Pannoniában? *Archaeologiai Értesítő* 109, 1982, 55–72.
- Ubl 1975 H. J. Ubl: Österreichische Limesforschung seit 1945. *Mitteilungen der Österreichischen Arbeitsgemeinschaft für Ur- und Frühgeschichte* 25, 1974–1975, 145–194.
- Varsik 2003 V. Varsik: Velký Meder und Bratislava-Trnávka: zwei germanische Siedlungen im Vorfeld des pannonischen Limes. In: *Stadt und Landschaft in der Antike*. Anodos. Supplementum 3. Trnava 2003, 153–196.
- Varsik 2005 V. Varsik: Die kaiserzeitlichen Siedlungen im pannonischen Vorfeld (Slowakei) im Lichte des keramischen Importes. In: Zs. Visy (ed.): *Limes 19. Proceedings of the 19th International Congress of Roman Frontier Studies, Pécs, Hungary, September 2003*. Pécs 2005, 281–291.
- Viczián et al. 2013 I. Viczián/B. Nagy/M. Deák/L. Rupnik: Environmental reconstruction of the area of Roman Brigetio (Komárom, Hungary). *Studia Geomorphologica Carpatho-Balcanica* 47, 2013, 95–105.
- Visy 2003 Zs. Visy: *The Ripa Pannonica in Hungary*. Budapest 2003.
- VKKI 2010 Vízügyi és Környezetvédelmi Központi Igazgatóság, Észak-dunántúli Környezetvédelmi és Vízügyi Igazgatóság: *A Víz Keretirányelv hazai megvalósítása. Vízyűjtő-gazdálkodási terv. 1–5 Cuhai-Bakony-ér és Concó vízyűjtő*. Győr 2010.

UNPUBLISHED SOURCES

- Ádám 2020 Sz. Ádám: *Dunai szigetek ártéri erdeinek természetvédelmi, ökológiai és tájtörténeti kutatása*. Dissertation thesis. Szent István Egyetem. Környezettudományi Doktori Iskola. Gödöllő 2020.
DOI: <https://doi.org/10.14751/SZIE.2020.082>
- Bödöcs 2008 A. Bödöcs 2008: *A római kori úthálózat térinformatikai vizsgálata a mai Magyarország területén*. Dissertation thesis. Eötvös Loránd Tudományegyetem, Történelemtudományok Doktori Iskola. Budapest 2008.

MAP AND OTHER PRIMARY SOURCES

- Lechner Nonprofit Kft. Image ID 1990-0478-0010, web site: <https://www.fentrol.hu/en/aerialphoto/165770> [26. 3. 2024]
Habsburg Empire, Cadastral maps (XIX. century)
Layers provided by Arcanum Database Ltd. <https://maps.arcanum.com/hu/map/cadastral/?bbox=2001616.489907389%2C6063877.445834357%2C2002917.7108810875%2C6064358.760246841&map-list=1&layers=3%2C4> [9. 5. 2024]
- HI69394 Map Collection of the Institute and Museum of Military History
HU-MNL-OL-S Repository of the National Archives of Hungary: HU-MNL-OL-S 79-529.-1, 323–324 <<https://maps.hungaricana.hu/en/MOLTerkeftar/a24540/>> [9. 5. 2024]
- HU-MNL-OL-S 91-6 Repository of the National Archives of Hungary: HU-MNL-OL-S 91-6 <<http://maps.hungaricana.hu/MOLTerkeftar/30424/>> [9. 5. 2024]
- HU-MNL-OL-S 91-7 Repository of the National Archives of Hungary: HU-MNL-OL-S 91-7 <<http://maps.hungaricana.hu/MOLTerkeftar/30425/>> [9. 5. 2024]
- HU-MNL-OL-S 12-X.-54 Repository of the National Archives of Hungary: HU-MNL-OL-S 12-X.-54 <<http://maps.hungaricana.hu/MOLTerkeftar/4497/>> [9. 5. 2024]
- HU-MNL-OL-S 12-XIII.-351 Repository of the National Archives of Hungary: HU-MNL-OL-S 12-XIII.-351 <<http://maps.hungaricana.hu/MOLTerkeftar/5389/>> [9. 5. 2024]
- HU-MNL-OL-S 12-XIX.-44 Repository of the National Archives of Hungary: HU-MNL-OL-S 12-XIX.-44 <<http://maps.hungaricana.hu/MOLTerkeftar/6220/>> [9. 5. 2024]
- HU-MNL-OL-S 101-164 Repository of the National Archives of Hungary: HU-MNL-OL-S 101-164 <<http://maps.hungaricana.hu/MOLTerkeftar/30851/>> [9. 5. 2024]
- Itin. Ant. 1848 G. Parthey/M. Pinder (eds.): *Itinerarium Antonini Avgvsti et Hierosolymitanvm*. Berlin 1848.
Not. dign. occ. 1876 O. Seeck (ed.): *Notitia dignitatum*. Berlin 1876.
RIU *Römische Inschriften Ungarns*. Budapest 1972–1984

Nové fakty o histórii a topografii Ad Mures (Ács-Bumbumkút, Maďarsko) na rípa Pannonica a otázka panónskej hranice (3.–4. storočie n. l.)

Bence Simon – Melinda Szabó

Súhrn

Napriek tomu, že rímske ruiny sú v oblasti Ács, v blízkosti potoka Concó, známe už od konca 19. storočia, vedomosti o histórii pevnosti sú príliš podrobné a nesúvislé. Bolo potrebné uskutočniť nový, komplexný výskum, ktorý zhromaždil staršie, fragmentárne výsledky a rozšíril naše poznatky prostredníctvom geofyzikálnych prieskumov a archeologických výskumov.

S cieľom identifikovať úlohu hradiska na rípa Pannonica sa uskutočnil epigrafický a topografický výskum. Naša hlavná úloha vychádzala zo skutočnosti, že pevnosti Ad Statuas a Ad Mures sa nachádzali oveľa bližšie k sebe, ako je obvyklá vzdialenosť medzi fortifikáciami v regióne. V prípade epigrafických údajov existuje príliš veľa nejasností o ich nálezových okolnostiach, preto niektoré objavené názvy vojenských jednotiek (ala III Thracum Severiana a ala I Augusta Ituraeorum) nemôžeme priamo spájať s pevnosťou Ad Mures. Ukázalo sa, že dôležité informácie nám poskytujú kolky na tehlách. Konkrétne kolky légie X Gemina, kohorty I Aelia milliaria sagittariorum a Ursicinus dux (legio II Italica) dokazujú, že tieto západopanónske jednotky sa podieľali na výstavbe a rekonštrukčných prácach na pevnosti v neskorej dobe rímskej.

Tábor Ad Mures bol postavený 1 km západne od ústia riečky Concó, ktorého údolie tvorilo hlavnú prírodnú bariéru v regióne. Kvôli meandrovaniu rieky bolo ťažké prekonať nielen jej strmý východný breh, ale aj vodnú plochu v jej údolí. Ad Mures a Ad Statuas sa nachádzali na brehoch Dunaja a dominovali v oblasti oproti najširšiemu cípu Veľkého Žitného ostrova (Csallóköz/Große Schüttinsel). Je logické, že tu musel existovať nejaký prístup pre obchod s germánskymi kmeňmi na druhej strane Dunaja, pretože podiel importovanej rímskej keramiky svedčí o čulých kontaktoch Rimánov s barbarmi v tejto oblasti.

Naše pozorovanie presnej hraničnej línie po roku 214 n. l. je založené na dvoch hlavných argumentoch. Po prvé, medzi mestami Ad Statuas a Ad Mures existuje veľká podobnosť na základe nálezov kolkov na tehách. Obe pevnosti sa nachádzali oveľa bližšie k Brigetiu ako ku Carnuntu, ale ako bolo opísané vyššie, pečiatky legie I Adiutrix, hlavnej posádky Brigetia, na oboch lokalitách úplne chýbajú. Väčšina kolkov nesie nápis legio X Gemina, ktorá sídlila v Pannonii Superior, neskôr Pannonii I. Na základe týchto údajov už D. Gabler dospel k záveru, že Ad Statuas zostala súčasťou Pannonie Superior aj po posunutí hraníc v roku 214 n. l. Predpokladal, že hranica musela byť niekde medzi Ad Statuas a Ad Mures. Ako ukazujú najnovšie vykopávky, situácia v Ad Mures je podobná ako v Ad Statuas. Legio I Adiutrix nie je na tehlových kolkoch vôbec zastúpená, ale kolký légie X Gemina sa našli za rovnakých nálezových okolností ako v Ad Statuas. Tieto údaje podporujú argument, ktorý už predložili B. Lőrincz a P. Kovács (Kovács 2003, 293), že nová hranica medzi Pannonia Inferior a Pannonia Superior bola umiestnená na východ do Ad Mures. Podľa topografických pozorovaní je jedinou možnou, a zároveň prirodzenou hranicou východne od Ad Mures a západne od Brigetio riečka Concó. Je dôležité zdôrazniť, že pevnosť Ad Mures patrila k Pannonii Superior (a neskôr k Pannonii I), čo znamená, že administratívne a stavebné činnosti pravdepodobne vykonávali vojská pridelené do tejto provincie. Môžeme však predpokladať, že ak si to vyžadovala nevyhnutnosť, jednotky najbližšej legionárskej pevnosti, aj keď sa nachádzali v inej provincii, mohli nejakým spôsobom pomáhať jednotkám Ad Statuas a Ad Mures v ich bojoch s barbarskými kmeňmi.

Obr. 1. Mapa vykopávok z roku 1989 na hradisku Ad Mures s vyznačenými stavebnými obdobiami na základe dokumentácie S. Petényiho, B. Simona.

Obr. 2. Súhrnná mapa pevnosti Ad Mures s identifikovanými stavebnými obdobiami (mapa B. Simon).

Obr. 3. Kresba nedávno objavených kolkov na tehách z Ad Mures. Bez mierky (kresba B. Simon).

Obr. 4. Fotografie nedávno objavených kolkov na tehách z Ad Mures (foto I. Koós, M. Szabó, B. Simon; grafická úprava B. Simon).

Obr. 5. Mapa limitného úseku medzi Ad Statuas a Azaum (mapa B. Simon).

Obr. 6. Vyznačenie rímskej cesty v bezprostrednom susedstve Ad Mures na satelitnej snímke z 20. 3. 2020 (Google Earth, obrázok © 2023 Maxar Technologies, grafická úprava B. Simon).

Obr. 7. Mapa limesu v oblasti okolo Ad Statuas a Ad Mures (mapa B. Simon).

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