

Archaeology of Conflicts

edited by
Pavel Drnovský – Petr Hejhal

Kniha je vydána v rámci dotace Ediční rady FF UHK pro rok 2020

The book is published as part of a grant from the Editorial Board
of the Faculty of Arts, University of Hradec Králové for 2020

Published by Pavel Mervart Publishing,
P. O. Box 5, 549 41 Červený Kostelec,
2020

Translation Jana Kličová, Urszula Baron

Printed H.R.G., spol. s r. o.

www.pavelmervart.cz

Reviewed:

prof. PhDr. Václav Matoušek, CSc.

Mgr. Petr Žákovský, Ph.D.

© Univerzita Hradec Králové, 2020

© Miloš Bordáč, Pavel Drnovský, Eduard Droberjar, Martin Gojda, Aneta Gołębiowska-Tobiasz,
Petr Hejhal, Jiří Hofman, Matouš Holas, Jiří Juchelka, Balázs Komoróczy, Sławomir Konik,
Martin Krůl, Radosław Liwoch, Łukasz Miechowicz, Klára Andresová Skoupá, Piotr Strzyż,
Pavol Šteiner, Marek Vlach, 2020

© Pavel Mervart 2020

ISBN 978-80-7465-469-5

Content

Introduction	9
Remarks on the possibilities of studying armed conflicts between the Romans and Germans during the Marcomannic Wars in Moravia	
<i>Eduard Droberjar – Balázs Komoróczy – Marek Vlach</i>	11
Medieval fortification systems in the form of linear embankments in present-day Poland	
<i>Łukasz Miechowicz</i>	27
Weapon imports in the burials of the Polovtsian elites in the Black Sea – Caspian Steppe	
<i>Aneta Gołębiowska-Tobiasz</i>	41
The Mongols in Poland in the 13th century. Traces of the Invasions	
<i>Radosław Liwoch</i>	55
The use of firearms in siege operations in medieval Poland. New discoveries and interpretations	
<i>Piotr Strzyż</i>	69
How to build a redoubt? Instructions from military manuals of the Thirty Years' War	
<i>Klára Andresová Skoupá</i>	83
The forms of defence of the Silesian-Hungarian border and their development in the Early Modern Period	
<i>Martin Krůl</i>	99
Eighteenth-century military camps in the light of written sources	
<i>Jiří Hofman</i>	115
The Austro-Prussian Wars in the territory of East Bohemia and their reflection in archaeological sources	
<i>Pavel Drnovský – Petr Hejhal – Matouš Holas</i>	123
Austrian military camp on the battlefield at Wagram in the light of archaeological sources	
<i>Ślawomir Konik</i>	133
Identification of components of the 1813 fortification line in the Lower Ohře Valley through aerial landscape survey	
<i>Martin Gojda</i>	149
Second phase of non-destructive archaeological survey of field fortification features in the neighbourhood of the Smolkov Artillery Fort	
<i>Jiří Juchelka</i>	171
Historical and archaeological evidence of a crashed American B-24 Liberator bomber near Trenčín	
<i>Miloš Bordáč</i>	195
Possibilities of archaeological research on the World War II battlefields in Slovakia 205	
<i>Pavol Šteiner</i>	207
Conclusions	223

Remarks on the possibilities of studying armed conflicts between the Romans and Germans during the Marcomannic Wars in Moravia¹

Eduard Droberjar – Balázs Komoróczy – Marek Vlach

In archaeological and historical research, it is a long-known and generally accepted fact that the Marcomannic Wars in 166/167–180 AD represented a turning point not only in the development of local Germanic populations, but also in the history of the Roman Empire (from the infinite amount of relevant literature, see e.g. Böhme 1975; Birley 1987; Ertl 2011; Kehne 2001; Kehne 2009a; Kehne 2016; Komoróczy 2009a; Kovács 2006; Mommsen 1896; Schmitt 1997; Tejral 1992; Zwikker 1941 and the collected papers Friesinger – Tejral – Stuppner 1994). The reports on these armed conflicts are preserved in a limited number of antique literary sources (for an overview in Czech language, see Bartoňková – Radová 2010; a detailed but partly outdated analysis, see Dobiáš 1964, 194–272), but on their basis we cannot reliably reconstruct the sequence of historical events and identify their accurate localisation. The origins of archaeological research on Roman relics in the Czech Republic, or in former Czechoslovakia, reach back to the First Czechoslovak Republic of 1918–1938 (comprehensively Gnirs 1976; Tejral 1986, both are listing older literature). The main research interest was long focused on the issue of possible identification of masonry buildings and architectonic relics of Roman military presence (the first, still considerably sceptical view, see Dobiáš 1921). The few indirect sources mainly comprise the well-known inscription on the castle rock in Trenčín (CIL III 13439; the first interpretation, see e.g. Dobiáš 1921; new editing, see Dobiáš 1957; current translation Bartoňková – Radová 2010, 68) and the Column of Marcus Aurelius in Rome with its dramatic scenes (Petersen – von Domaszewski – Calderini 1896; interpretation of scenes, see e.g. Kovács 2005; Wolff 1994; Zwikker 1941). A breakthrough in modern research occurred with systematic excavations during the last decades of the 20th century, which were conducted on the long-known but ambiguously interpreted sites on Hradisko (Burgstall) near Mušov and in the camp at Iža near Komárno (on the older phases of research on Hradisko near Mušov, see e.g. Tejral 1986; Tejral 1992, 381–401; Tejral 1999, 81–86; on the camp in Iža, see e.g. Kuzmová – Rajtár 1986; Hüssen – Rajtár 1994, 217–219). Another boosting factor was the development of aerial archaeology with first detections of crop marks in Lower Austria, which were interpreted as layouts of temporary camps (e.g. Friesinger 1985, 258–259). The 1990s saw an upswing in aerial survey also in countries beyond the former Iron Curtain. Implementation of this research method in Slovakia and in the Czech Republic resulted in detection of many fortification

¹ This paper was elaborated within the grant project of the Czech Science Foundation (GAČR) “Protohistoric communities of the «Marcomannic» settlement zone in the Middle Danube Region – Structure and dynamics on the basis of digital modelling” (Reg. No. 20-11070S) and within the Specific Research of the Faculty of Arts, University of Hradec Králové (2020) “The Romans and Germans in Jevíčko during the Marcomannic Wars: the forms of confrontation between two civilisations”.

relics of Roman temporary camps (older compendia with history of research, see e.g. Bálek – Droberjar – Šedo 1994; Bálek – Šedo 1998; Hanzelyová – Kuzma – Rajtár 1996, 194–212; Komoróczy 2009b; Komoróczy – Vlach 2010; Tejral 1999, 114–130).

Archaeological record of various aspects of the Marcomannic Wars is currently being explored and interpreted with increasing clarity and differentiation due to intensive research activities of the recent decades. From the territory of Slovakia west of the Little Carpathians, Lower Austria north of the Danube and from South and Central Moravia, that is, from regions which are considered to have been the settlement territory of the Marcomanni in the 2nd half of the 2nd century AD (see e.g. Droberjar, 2018, 37, Fig. 10; Rajtár 2014, 111), we already know a relatively wide spectrum of archaeological evidence that can be used for identification of Roman military activities (Komoróczy et al. 2020). It is generally divided into movable and immovable sources and their interpretation possibilities are determined by the character of individual forms (summary of the spectrum of archaeological sources with emphasis on the evidence of war conflicts in the Roman territory, see Fischer 2012a). A clearly distinguished group of sources has been interpreted as a direct evidence of Roman military presence. This group mainly includes the central fortified military base on Hradisko near Mušov (the site is not treated here in detail, a summary of knowledge see e.g. Komoróczy 2008; Komoróczy 2009a; Komoróczy 2009c; Komoróczy 2010; Tejral 1992, 381–401; Tejral 1994a, 299–300; Tejral 2014) and the so-called temporary or field camps. The current state of knowledge, despite many open questions, enables to interpret Hradisko near Mušov as a central headquarters and logistic base of Roman military operations during the Marcomannic Wars (more precise determination and chronologisation of individual construction phases will be a task for future research; currently we can only theorize about possible older construction phases, which are not clearly identified in archaeological finds; cf. Bálek – Šedo 1996; Komoróczy 2006; Tejral 2014; Šedo – Knápek 2019). This central military installation

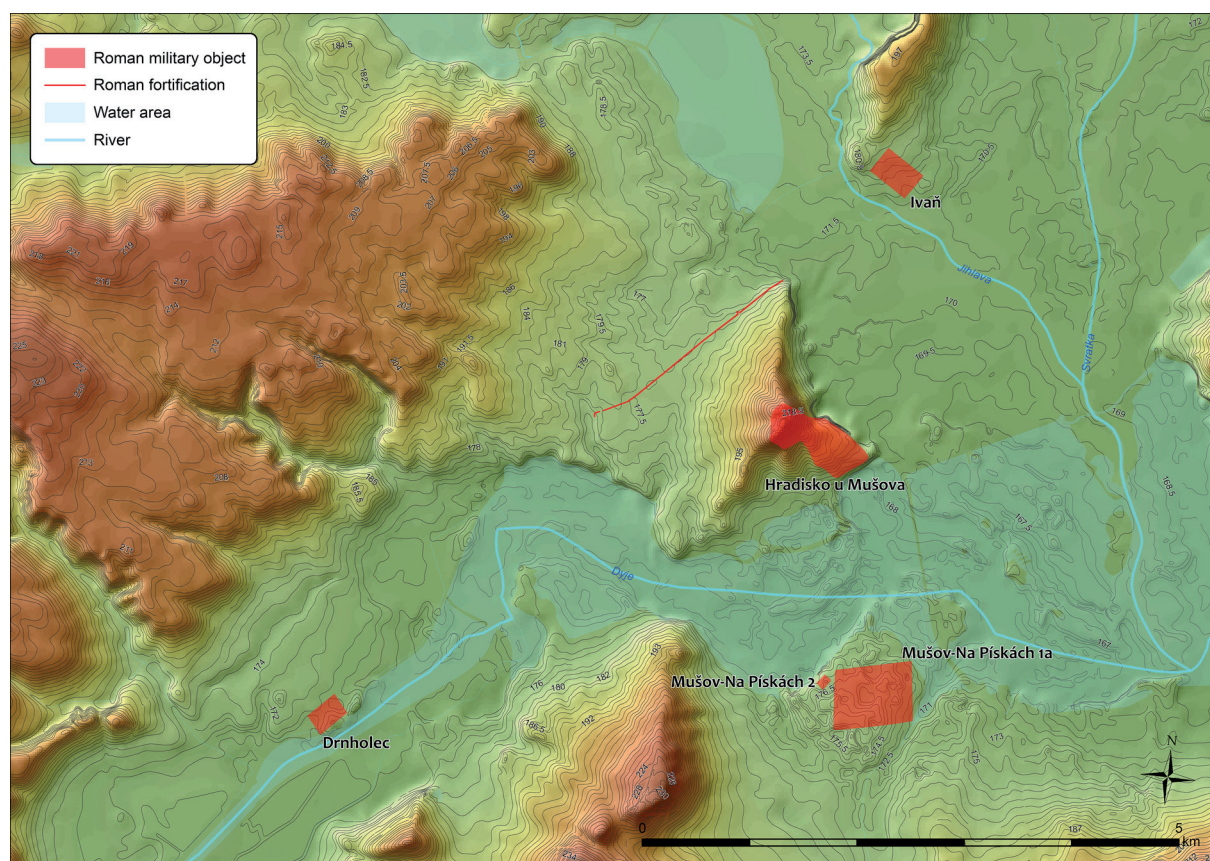


Fig. 1. Roman military installations in the surroundings of Hradisko near Mušov.

may have offered not only lodging for military units, but also conveniences for the military command coordinating the expedition forces in the whole operation territory, for logistic support and provisions, care of the wounded and maybe also for the accommodation of very important persons. The installation differs from common camp architecture not only by the character of the hitherto detected inner development, but also by its unique layout and location (Fig. 1).

The southern and eastern slopes of the hill at Mušov are wedged in a naturally delimited area protected by a system of the alluvial plain of the river Dyje and its tributaries Jihlava and Svatka. On the northern and north-western sides, the whole area between the rivers Jihlava and Dyje with an extent of almost 4 km² is defended by an outer fortification line, which has the form of a 2,1 km long ditch (Bálek – Šedo 1998, 163–164). This ditch, according to most recent archaeological detections, is with certainty dated to the period of the Marcomannic Wars. The access roads to this central base were guarded by military units dislocated in temporary camps, which were identified in cadastral districts of the municipalities of Ivaň and Drnholec or on the site of Mušov – Na Pískách (recent discovery of the camp at Drnholec, see Komoróczy et al. 2019, 46, obr. 28). The complex structure of Roman military features on Hradisko near Mušov and in its surroundings is currently interpreted as an archaeological reflection of Roman geo-strategic interests, which consisted, among other things, in the initial establishment of a core or centre of administration of the whole occupied settlement territory of the Marcomanni. The most important group of sources, which are used to study various aspects of the strategy of the Roman army in the Marcomannic territory and to identify the spatial extent of its activities and possible interactions with structures of local Germanic population, is represented by the so-called temporary camps (on the history of knowledge, terminology and research methods used in our country, see e.g. Bálek – Droberjar – Šedo 1994; Bálek – Šedo 1998; Komoróczy et al. 2014 with further literature). In the area in question, we currently know positive evidence of at least 26 camps from 16 sites in total

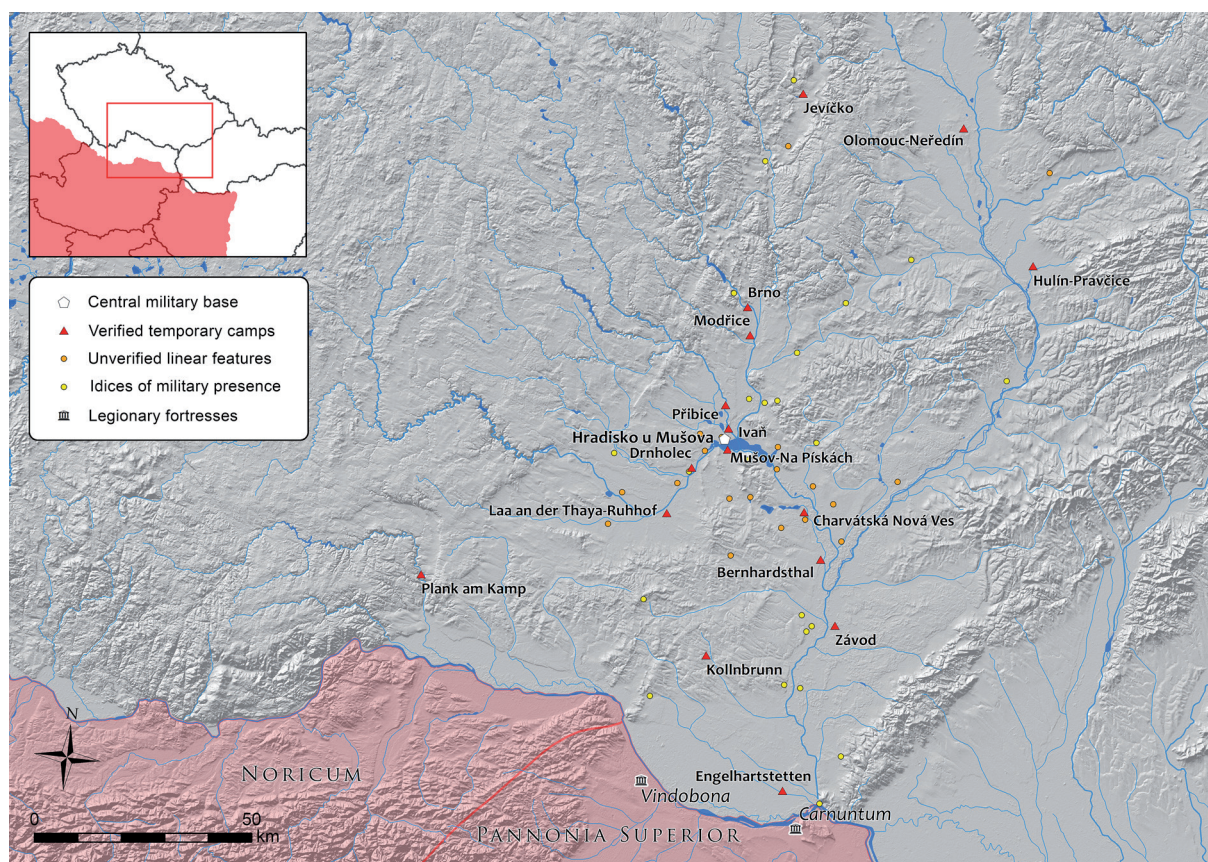


Fig. 2. Distribution of Roman military installations in the Marcomannic settlement territory west of the Little Carpathians.

(Fig. 2; the newest overview of camps in Austria, see Groh – Sedlmayer 2015; current state of knowledge about the camps in Slovakia and Moravia, cf. Komoróczy et al. 2018; Komoróczy – Vlach – Hüssen 2018; Komoróczy et al. 2020 id. in print, all of them with further literature).

Their geographical distribution clearly reflects the strategic and tactic parameters of Roman occupation of this territory during the Marcomannic Wars. The positions of individual camps show a striking relation to settlement structures of local Germanic population, which should have been controlled by the Roman army. The camps on the densely populated banks of the Lower Morava River (e.g. Závod, Bernhardsthal, Charvátská Nová Ves) protected the Roman troops on the main access road to the heart of the hostile territory. They probably also served as transshipment points and their garrisons oversaw this important river supply route. The camps on the middle reaches of the river Dyje (Mušov – Na Pískách, Ivaň, Drnholec) may have played an important role in defence of the central headquarters on Hradisko near Mušov, where the settlement and power centre of the Marcomanni was situated in the second half of the 2nd century AD. The garrisons of these camps could have been charged to continuously oversee the access roads and fords. Also here, most probably in the area of the camps and of a sheltered anchorage ground at Přibice, large expedition corps gathered before setting out for the campaign to the north-eastern peripheries of the Marcomannic settlement territory. The camps located farther in the region of Brno (Modřice, Brno) probably represent an archaeological reflection of military control over another settlement enclave, whose archaeological traces are less distinct (on the situation in the region of Brno during the Roman Period, see Klanicová – Komoróczy 2011, 405–426). The camp in Brno – Vojtova St. then probably exerted control over an important ford through the river Svatka. The camps detected in the region of Malá Haná (Jevíčko) and in the foreland of the Moravian Gate in the Upper Morava Valley (Olomouc-Neředín, Hulín-Pravčice), according to available indications, had approximately the same dimensions. They probably represent the outer perimeter of the Roman military presence, protecting the access (and also escape) corridors from the side of Germanic communities inhabiting the areas in the north and northeast. The location of these camps at the same time corresponds to the external border of the Marcomannic settlement zone in the region.

On the basis of the above-described state of knowledge of immovable evidence of Roman military presence we can formulate a relatively coherent interpretation thesis on the intents and acts of the Romans in the studied territory during the Marcomannic Wars. Permanent seizure of the road network, effective use of river and overland transport routes of goods and people, control over the most densely populated regions and access corridors in the peripheries of the occupied territory, strengthened defence of the central occupation base, intervention in the social conditions of local population. All these tools, decoded from the available sources of relevant information, testify to supremacy of the Roman power and its army both from the aspect of warfare and from the conceptual or logistic aspect. This picture also exhibits some degree of accordance with several fragmentary reports from antique literary sources on the intentions of Emperor Marcus Aurelius to make this territory a new province called Marcomannia (cf. Alföldy 1979; Kehne 2016, 239–241; Komoróczy 2009a; Strobel 2001). However, these reports are now difficult to verify by linguistic and historiographic methods.

The immovable evidence of Roman military presence in the Marcomannic settlement territory provides a well comprehensible coherent picture of the geo-strategic goals of Roman occupation, but in the most cases it does not prove any direct confrontations between local Germanic population and the Romans. However, even the mere diction of literary sources repeatedly tells about an exhausting war “that no one remembered until that time” (*Historia Augusta, Vita Marci* 17, 1–3, translation Bartoňková – Radová 2010, 112) and about “many severe battles and fights” (*Cassius Dio, Rhómaiké historía* 71, 8, translation Bartoňková – Radová 2010, 59). The scenes on the Column of Marcus Aurelius in Rome – although they cannot be regarded as a documentary record of the real sequence of war events – repeatedly depict battles, sieges, villages being burnt down, women and animals being abducted and men being executed (Fig. 3).



Fig. 3. Scene No. 20 on the Column of Marcus Aurelius in Rome. It portrays the attack of Roman troops on a Germanic settlement. The soldiers enter the village after having broken the resistance of Germanic warriors bearing different shields than the Romans, and set individual houses or huts on fire (after Petersen – von Domaszewski – Calderini 1896).

However, archaeology in the Marcomannic territory still lacks any direct evidence which could be interpreted as an unequivocal on-site record of violent conflicts. No battlefields were identified and the same is also true of burial grounds or individual graves, that is, no skeletal remains were found which could be clearly ascribed to participants in these fights (an exception might be represented by

six Roman provincial cremation burials in the vicinity of the camps in Radvaň nad Dunajom, in the Quadic territory on the northern bank of the Danube; Hüssen – Rajtár 1994, 220, Abb. 4, 6). The most representative evidence of the Roman impact on living conditions of the Germanic society during the Marcomannic Wars is so far the repeatedly detected discontinuity of Germanic settlement activities in several locations, where the Roman forces built their camps. On the sites of the Roman camps in Bernhardsthal in Lower Austria, Mušov – Na Pískách, Modřice and probably also Drnholec in Moravia or Závod in Slovakia, archaeologists distinguished (whether directly through excavations or in the collections of small finds from the surface layer) a Germanic settlement horizon of the relative-chronological stage B2 and a settlement horizon of the stage C1. Although the chronologisation of settlement horizons is not that fine to verify this assumption, it is highly probable that the local inhabitants were forced to vacate these settlements before the construction of Roman camps (in detail, see e.g. Komoróczy 1999; Komoróczy 2002; Rajtár 2014, 115; Tejral 1999, 127–129; Tejral 2008, 74–85; chronology of settlement horizons, cf. also Droberjar 1997). Nevertheless, archaeology is not able to decide whether they did so on their own accord, maybe even some time before the arrival of the Romans, or whether it has happened under active participation of the Roman army (which is repeatedly indicated by the scenes on the Column of Marcus Aurelius). The ever increasing number of archaeological sources and the constantly developing analytical possibilities of research into the Roman intervention not only provide more and more accurate information on the extent and intensity of Roman activities in Marcomannic territory, but also bring our discipline – both spatially and methodically – closer to the point when it will be able to identify these sources as a direct evidence of armed conflicts between the Roman and Germanic warriors. Now we will try to briefly summarize how this shift is displayed.

The first important step towards the identification of places through which the Roman army might have moved in Marcomannic territory and where also an open conflict with Germanic warriors might have taken place, can be the distinct increase in accuracy of spatial evaluation of the already known sources in the GIS environment (the first generation of GIS analyses in connection with the topic of Roman military intervention, see Komoróczy – Vlach 2010). The Marcomannic settlement territory, comprising the present-day Moravia, Lower Austria and the Morava River valley in Slovakia west of the Little Carpathians, is most markedly structured by vast lowland areas along the axial rivers of the region. The overall height configuration implies the “passability” of the region mainly in the north(-eastern) – southern direction. The higher elevations, connected with more impermeable relief of the landscape, mainly appear in its peripheral parts. The vast majority of this territory has been almost continuously populated already since the Neolithic and we can thus suppose a relatively high level of its deforestation, although this assumption has no support in deeper palaeoenvironmental data. The general distribution map clearly shows that the localisation of the hitherto known Roman camps (a sort of “interception points” on the marching route of the Roman army) is evidently bound to the area of axial rivers, particularly to their first terrace edges. The local geomorphology also determines the orientation of temporary camps, which generally parallels the direction of watercourses in their neighbourhood and does not exhibit any regularities according to cardinal points. An overland routes under military control must have also existed along the rivers, which were probably used for transport of military equipment and provisions. The camps which were built on this road either offered a permanent shelter to units guarding the river and overland roads (or the settlement structures in the given area), or served as gathering points for large numbers of soldiers who used the road for quick and operative redeployments. The analytical tools of GIS then enable a reliable modelling of overland routes, more precisely corridors of inconstant and changing roads which may have been used as connecting lines between individual camps, along which the Roman troops and their baggage train may have been transferred (Fig. 4; details on these models, see Komoróczy – Vlach 2018; Komoróczy – Vlach 2019).

We are not able to identify the course of the roads between individual camps in open terrain, but they surely did not exist in such a stabilized form as it was with the Roman territory itself. Particularly in the geomorphologically more variable and evidently also distinctly less populated peripheries of

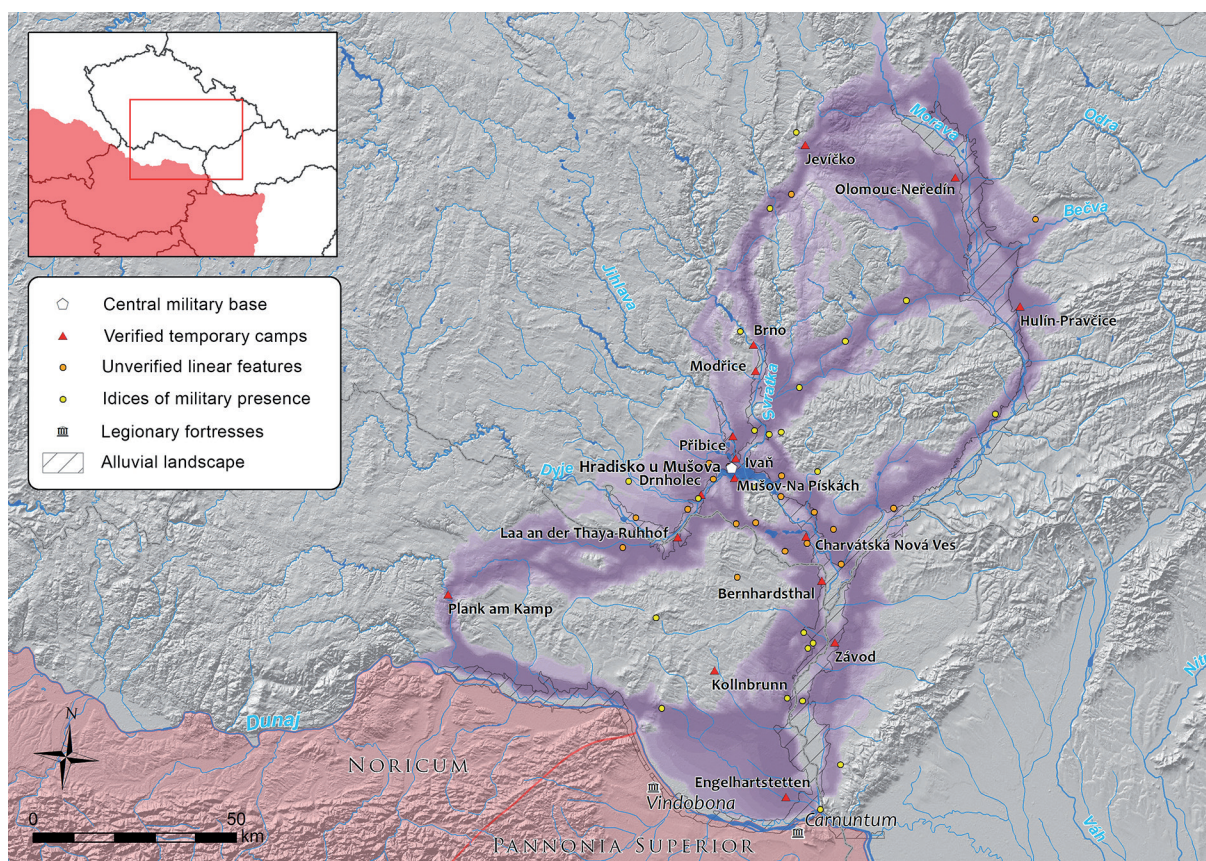


Fig. 4. Modelled communication corridors used by the Roman army in the Marcomannic settlement territory.

the Marcomannic settlement zone, for example in the communication corridor between the camps of Brno, Jevičko and Olomouc-Neředín, the military contingents must have moved forward within a relatively narrow area. This fact, together with the expectable higher density of natural vegetation in this area, made the Roman troops much more vulnerable to an assault by the Germans.

The places of possible armed conflicts between the Romans and Germans are also identified by sources from the category of movable finds. Archaeological significance of Hradisko near Mušov and of other military installations, which are dated for certain to the period of the Marcomannic Wars, also consists in their extraordinary contribution to the identification of finds from the so-called horizon of Marcomannic Wars. The collections of archaeological finds acquired within long-term excavations on Hradisko, particularly the Roman militaria (Tejral 1994b), ceramics (Droberjar 1993; Klanicová 2008), coins (Komoróczy 2008, 417–422) or building material (Komoróczy 2003), predominantly fall within the 2nd half of the 2nd century AD. Equally important for the identification of material from this period, particularly as regards the components of Roman arms and equipment, are the collections acquired from features of the timber-and-earth phase of the auxiliary camp in Iža (Rajtár 1994), surface finds from the shortly-used *vexillatio* camp at Eining-Unterfeld in Raetia (Jütting 1995), or at a smaller extent also the finds from the camp and the civilian settlement (*vicus*) in Regensburg-Kumpfmühl (Faber 1994), which were destroyed during the wartime. Despite the complicating fact that the basic forms of Roman arms and equipment have gradually changed over the course of the Marcomannic Wars, these find assemblages enable us to relatively exactly define some leading types of finds (most recent compendium, see Burandt 2016; id. 2017; further, see Bishop – Coulston 2006, 128–148; Fischer 2012b, 335–340), whose occurrence most probably indicates an unspecified form of presence of the Roman army at a given place or an interaction between the Roman army and the local Germanic population.

Finds of this type very frequently occur in collections acquired with the help of metal detector survey on the surface (e.g. Jílek – Žákovský 2014; Komoróczy – Vlach 2010, 255; Komoróczy – Vlach – Hložek 2014; Komoróczy et al. 2019, 31, obr. 16: 25–26; Tejral 1994b; Tejral 1999, 135–147). Regarding the fact that the vast majority of them are solitary finds, their interpretation (e.g. evidence for direct presence of Roman army at a given place, secondary deposition in the Germanic settlement context, ordinary loss etc.) is individual and very uncertain. The general parameters of retrieval, recording and documentation of the so-called detector finds in the Czech Republic unfortunately considerably complicate their evaluation and systematic comprehensive examination (on the topic, see Komoróczy – Vlach – Hložek 2014, 779–780; basic professional preconditions for recording these finds and the necessary special knowledge for their interpretation, see Droberjar 2015b; Komoróczy – Vlach – Zelíková 2017). This fact also represents one of the main limitations of archaeological research into battlefields, for example those of the Marcomannic Wars, in our territory. Examples of such discoveries in Europe are not very numerous (an overview of known Roman battlefields, see e.g. Fischer – Moosbauer 2013 with further literature), but the positively evidenced battlefields, such as Kalkriese, Harzhorn or Abritus, definitely prove an exceptional and indicative significance of documented collections of metal artefacts, which were mostly found scattered in the uppermost ground layer with the help of metal detectors. Detailed analysis of this phenomenon goes far beyond the scope of our paper, but it is to mention that such armed conflicts are often indicated by fragments of military equipment most susceptible to damage, such as helmets, small fittings from belts and *baltea* (baldrics), as well as by a frequent occurrence of hobnails from military sandal-boots and weapons or their parts, which do not bear any traces of intentional deformation.

Another important territory, apart from the South Moravian sites, where such Roman military finds began to concentrate in recent years, is the region of Malá Haná on the Bohemian-Moravian border, or in West Moravia respectively (Droberjar – Jarůšková 2017; Droberjar – Jarůšková 2018; Droberjar 2020. Archaeological excavations in this region are already conducted since 2010 by the Department of Archaeology, University of Hradec Králové, in recent years also in cooperation with the Institute of Archaeology of the Czech Academy of Sciences in Brno and the Museum of Boskovice District. Within the past ten years, intensive Germanic settlement activity, mostly from the Early Roman Period, was evidenced in the whole territory of Malá Haná (Droberjar – Jarůšková 2017, with bibliography). Systematic excavations are mainly concentrated in the cadastral district of Jevíčko-Předměstí, where multiple sites with Roman-Period finds were detected (Fig. 5). The most important excavation sites (Fig. 6) are Jevíčko IV – a cremation burial ground from the 2nd half of the 2nd century AD (Droberjar 2015a, 113–117, Abb. 15–18; Droberjar – Vích 2011; Droberjar – Jarůšková 2017, 10–12, 44–64) and Jevíčko XIII – an extensive settlement from a short period of time (Droberjar 2019) corresponding to the existence of the burial ground Jevíčko IV. These two sites (situated about 700 m from one another) evidently were closely related. The finds of Germanic warrior graves, Roman and Germanic militaria and numerous Roman imports on the site Jevíčko IV and other Roman imports on the site Jevíčko XIII, together with Germanic artefacts, point to the period of the Marcomannic Wars or to the time around these war events.

The detection of a Roman temporary camp (Jevíčko XII) in 2016 – the so far northernmost fortification from the time of the Marcomannic Wars (Droberjar – Jarůšková 2017, 29–30; Komoróczy, B. – Vlach, M. 2017; Komoróczy et al. 2019, 174) – brought a new perspective into the research on Germanic settlement in Jevíčko and in its surroundings. The excavation was carried out by employees of the Regional Museum in Litomyšl and Institute of Archaeology of the Czech Academy of Sciences in Brno. They documented the western part of a ditch in a length of about 120 m, and identified and explored several baking ovens distributed along the inner side of the fortification. The ditch, and therewith also the entire camp, can be dated on the basis of fragments of Central Gaulish terra sigillata discovered at the bottom of the V-shaped ditch. The chronology of the Roman installation in Jevíčko is thus reliably fixed to the period of the Marcomannic Wars. In the vicinity of the presumed southern part

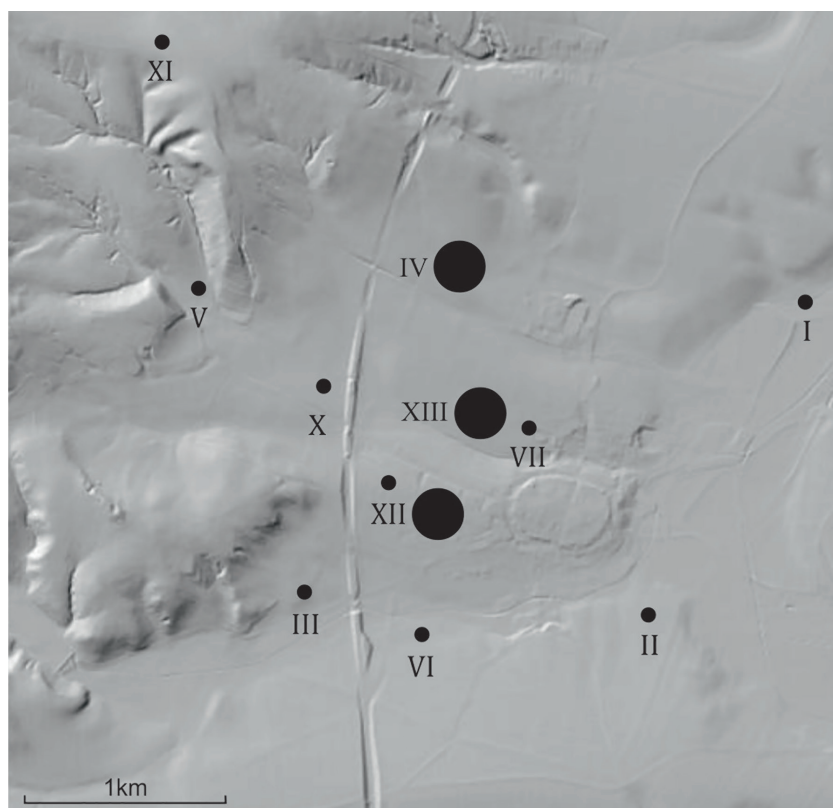


Fig. 5. Jevíčko (Svitavy Dist.). Roman Period settlement and stray finds.



Fig. 6. Jevíčko (Svitavy Dist.): three main excavation sites. Jevíčko IV (burial ground), Jevíčko XII (reconstruction of the Roman temporary camp) and Jevíčko XIII (settlement).

of the camp, a Roman lead sling-bullet was found using a metal detector (Droberjar – Jarůšková 2017, 89, No. 176). So far we can only hypothesize about the dimensions of the camp because we know the course of only one part of the western ditch (Fig. 6).

There is a course of the extensively documented ditch, partly explored by cross-sections, and in southern direction also a part of the ditch line, which is visible in an aerial imagery at a length of about 140 m. The northern end of the western ditch is delimited to a certain extent by a modern terrain edge. The southern end may be delimited by a line and a continuation towards the east where the dark line of the ditch is no longer visible in the vegetation cover or, and this might be more likely, by a small part of an indistinctly rounded corner with a very short preserved line forming an obtuse angle. From this we can infer that the camp may have had a rhombic (or rhomboid?) shape with the side length of about 430 m. The area in the case of a square or rhombic layout would be ca. 18.5 hectares. It would thus correspond to the area of mid-sized camps of around 20 hectares as we know them in Moravia, e.g. in Olomouc-Neředín (20,4 ha), Modřice (21 ha) or in Mušov – Na Pískách 1c (21,1 ha). All of these three camps had a rhomboid shape. In the case of a rhomboid layout, the area of the camp in Jevíčko might have reached up to 27,7 ha (430 x 645 m) and it would be comparable to the camps in Přibice 1 (25,8 ha) and Hulín-Pravčice (26,1 ha). The camps in Hulín-Pravčice and Jevíčko have the same orientation according to cardinal points and the same obtuse angle at the south-western corner (Vlach 2016, 88, obr. 34).

In recent years, the concentration of Roman and Germanic militaria in Jevíčko, but also on other settlement sites from the 2nd half of the 2nd century AD in the region of Malá Haná (Droberjar 2020), has been extended by another type of archaeological sources. This evidence is represented by stray finds as well as by collections of Roman and Germanic militaria and other artefacts from the period of the Marcomannic Wars in the hilly wooded landscape west of the lowland parts of Malá Haná. Among these finds are fragments of a Niederbieber type helmet (Fig. 7) and Roman brooches from Zadní Arnoštov (Droberjar – Jarůšková 2018), Germanic militaria from the site Jevíčko XI (Vích – Jílek 2016), fragment of a Roman sword of type Buch-Podlodów or Lachmirowice-Apa from Křenov (Vích et al. 2018) and other still unpublished finds from other sites.

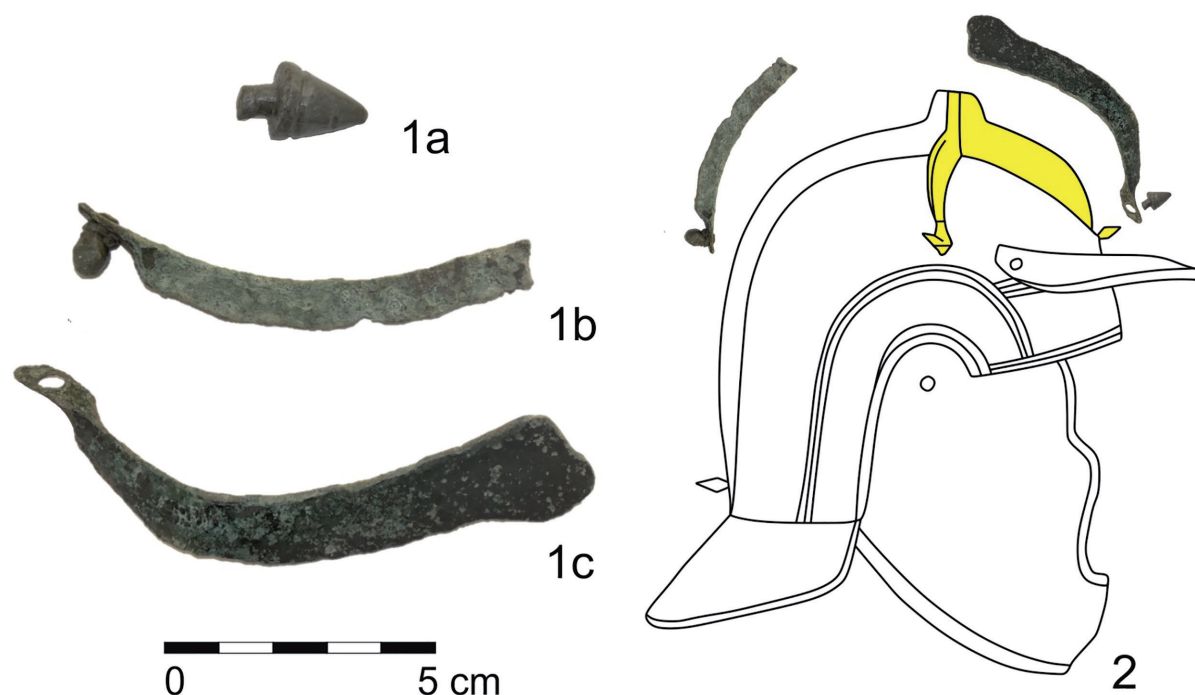


Fig. 7. Zadní Arnoštov (Svitavy Dist.). Fragments of a Niederbieber-type helmet (after Droberjar – Jarůšková 2018).

How to interpret these artefacts in unpopulated and often also hardly accessible places? We can assume that the Romans and Germans have moved through these areas but we also can hypothesize about potential evidence of armed conflicts. Roman soldiers, after all, also encountered difficult terrain in the Battle of the Teutoburg Forest or in the Battle at the Harzhorn (literature see above) – deep in the barbarian territory, where the Germans determined the routes of Roman advance. It is, of course, tempting to localise the place (places) of partial fights between the Romans and Germans (or maybe also a major battle?) into these vast forest areas. To be able to identify ourselves with the suggested hypothesis, we must direct our joint research activities with modern technologies at this demanding environmental context. This is the only way how to interpret the venue or directly the archaeological evidence of Roman-Germanic armed conflicts from the time of the Marcomannic Wars. Besides the main Roman military base at Mušov with a wide background of temporary camps in a densely populated Germanic settlement zone and the Roman *castellum* in Iža on the Danube, the region of Malá Haná thus gradually becomes an important territory of research into the Marcomannic Wars and a potential area of a direct military confrontation between the Germans and Romans deep in the barbarian territory.

References

- Alföldy, G. 1979: Der Friedensschluss des Kaisers Commodus mit den Germanen. In: Klein, R. (ed.), Marc Aurel. Darmstadt, 389–428.
- Bálek, M. – Droberjar, E. – Šedo, O. 1994: Die römischen Feldlager in Mähren (1991–1992). *Památky archeologické* 85, 59–74.
- Bálek, M. – Šedo, O. 1996: Das frühkaiserzeitliche Lager bei Mušov – Zeugnis eines augusteischen Feldzugs ins Marchgebiet? *Germania* 74, 399–414.
- Bálek, M. – Šedo, O. 1998: Příspěvek k poznání krátkodobých táborů římské armády na Moravě. *Památky archeologické* 89, 159–184.
- Bartoňková, D. – Radová, I. 2010: Antické písemné prameny k dějinám střední Evropy. Praha.
- Birley, A. R. 1987: Marcus Aurelius: A biography. New Haven.
- Bishop, M. C. – Coulston, J. C. N. 2006: Roman military equipment from the Punic Wars to the Fall of Rome. Second edition. Oxford.
- Böhme, H. W. 1975: Archäologische Zeugnisse zur Geschichte der Markomannenkriege (166–180 n. Chr.). *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 22, 153–217.
- Burandt, B. A. N. 2016: Römische Militärausrüstung der Markomannenkriege in Relief und Fund. In: *Der Limes, Nachrichtenblatt der Deutschen Limeskommission* 11, 2016/2, 9–12.
- Burandt, B. A. N. 2017: Die Ausrüstung der römischen Armee auf der Siegessäule des Marcus Aurelius in Rom: Ein Vergleich zwischen der skulpturalen Darstellung und den archäologischen Bodenfunden. Oxford.
- Dobiáš, J. 1921: Dva příspěvky k topografii válek markomanských a kvádských. *Český časopis historický* XXVII, 135–156.
- Dobiáš, J. 1957: Nový nápis ze Zany (Diana Veteranorum) a římský nápis na skále trenčínské (CIL III 13439 = Dessau ILS 9122). *Listy Filologické*, N. Ř. 5, 179–196.
- Dobiáš, J. 1964: Dějiny československého území před vystoupením Slovanů. Praha.
- Droberjar, E. 1993: Die römische Keramik vom Burgstall bei Mušov, Mähren. *Archaeologia Austriaca* 77, 39–87.
- Droberjar, E. 1997: Studien zu den germanischen Siedlungen der älteren römischen Kaiserzeit in Mähren. *Fontes Archaeologici Pragenses* Vol. 21. Praha.
- Droberjar, E. 2015a: Markomannen und superiores barbari in Třebusice und Jevíčko zur Zeit der Markomannenkriege. Zur Problematik der Übergangsstufe B2/C1 in Böhmen und Mähren. *Přehled výzkumů* 56-2, 103–125.

- Droberjar, E. 2015b: K významu detektorových nálezů pro zkoumání doby římské. *Živá archeologie* – REA 17, 69–72.
- Droberjar, E. 2018: The emergence of the Suebi and further developments in Bohemia. In: *IN TEMPORE SUEBORUM. El tiempo de los Suevos en la Gallaecia (411–585). El primer reino medieval de Occidente. Volumen de estudios. Ourense*, 35–44.
- Droberjar, E. 2019: Římská barbotinová keramika z Jevíčka, okr. Svitavy. *Archeologie ve středních Čechách* 23, 515–520.
- Droberjar, E. 2020: Marcomannic wars and new Roman Period discoveries in Jevíčko (West Moravia/East Bohemia). *Archeologické rozhledy* 72, 479–522.
- Droberjar, E. – Jarůšková, Z. 2017: Barbaři v pohybu. Jevíčko a Malá Haná v době římské. Boskovice.
- Droberjar, E. – Jarůšková, Z. 2018: Aurei císaře Nerona na Malé Haně a otázka jejich interpretace. *Archeologie ve středních Čechách* 22, 655–662.
- Droberjar, E. – Vích, D. 2011: Nové žárové pohřebiště z doby římské v Jevíčku-Předměstí, okr. Svitavy. In: Droberjar, E. (ed.), *Archeologie barbarů 2010: Hroby a pohřebiště Germánů mezi Labem a Dunajem*. Olomouc, 23–38.
- Ertl, R. F. 2011: Kaiser, Feldherr und Philosoph Marc Aurel. Ein Leben zwischen Rom und Carnuntum. Bad Deutsch-Altenburg.
- Faber, A. 1994: Das römische Auxiliarkastell und der Vicus von Regensburg-Kumpfmühl. *Münchner Beiträge zur Vor- und Frühgeschichte* 49. München.
- Fischer, Th. 2012a: Archaeological Evidence of the Marcomannic Wars of Marcus Aurelius (AD 166–180). In: Ackeren, M. van (ed.), *A companion to Marcus Aurelius*. Malden, 29–44.
- Fischer, Th. 2012b: Die Armee der Caesaren. *Archäologie und Geschichte*. Regensburg.
- Fischer, Th. – Moosbauer, G. 2013: Römische Schlachten – archäologisch bezeugt. In: Pöppelmann, H. – Deppmeyer, K. – Steinmetz, W.-D. (Hrsg.), *Roms vergessener Feldzug. Die Schlacht am Harzhorn*. Veröffentlichungen des Braunschweigischen Landesmuseums 115. Darmstadt, 51–56.
- Friesinger, H. 1985: Römische Befestigungsbauten nördlich der Donau in Niederösterreich. In: *Lebendige Altertumswissenschaft. Festgabe zur Vollendung des 70. Lebensjahres von Hermann Vetters*. Wien, 258–259.
- Friesinger, H. – Tejral, J. – Stuppner, A. (Hrsg.) 1994: Markomannenkriege – Ursachen und Wirkungen. *Spisy Archeologického ústavu AV ČR Brno 1*. Brno.
- Gnirs, A. 1976: Beiträge zur Geschichte und Geographie Böhmens und Mährens in der Zeit des Imperium Romanum. Bonn.
- Hanzelyová, E. – Kuzma I. – Rajtár, J. 1996: Letecká prospekcia v archeológii na Slovensku. *Archeologické Rozhledy* 48, 194–212, 275–278.
- Hüssen, C.-M. – Rajtár, J. 1994: Zur Frage archäologischer Zeugnisse der Markomannenkriege in der Slowakei. In: Friesinger, H. – Tejral, J. – Stuppner, A. (Hrsg.), *Markomannenkriege – Ursache und Wirkungen*. *Spisy Archeologického ústavu AV ČR Brno 1*. Brno, 217–232.
- Jílek, J. – Žákovský, P. 2014: Ein Schwert vom Typ Lauriacum-Hromówka, Var. Hromówka aus Brno-Jundrov. In: Komoróczy, B. (ed.), *Sociální diferenciace barbarských komunit (Archeologie barbarů 2011)*. *Spisy Archeologického ústavu AV ČR Brno 44*. Brno, 335–339.
- Jütting, I. 1995: Die Kleinfunde aus dem römischen Lager Eining-Unterfeld. *Bayerisches Vorgeschichtsblätter* 60, 143–230.
- Kehne P. 2001: Markomannenkriege. §1. Historisches. In: Beck, H. – Geuenich, D. – Steuer, H. (Hrsg.), *Reallexikon der germanischen Altertumskunde* Bd. 19. Berlin-New York, 308–316.
- Kehne, P. 2009a: Rom in Not. Zur Geschichte der Markomannenkriege. In: *Varusschlacht im Osnabrücker Land – Museum und Park Kalkriese* (Hrsg.), *Konflikt. 2000 Jahre Varusschlacht*. Stuttgart, 98–108.
- Kehne P. 2016: Zur althistorischen Erforschung der Markomannenkriege. Eine Annäherung mit aktualisierter Chronik der Jahre 166 bis 180 n. Chr. *Slovenská Archeológia* 64/2, 193–260.
- Klanicová, S. 2008: Horizont nálezů z období markomanských válek na příkladu terry sigillaty z Hradiska u Mušova. In: Droberjar, E. – Komoróczy, B. – Vachútová, D. (eds.), *Barbarská sídliště. Chronologické, ekonomické a historické aspekty jejich vývoje ve světle nových archeologických výzkumů (Archeologie barbarů 2007)*. *Spisy Archeologického ústavu AV ČR Brno 37*. Brno, 439–452.

- Klanicová, S. – Komoróczy, B. 2011: V odlesku antiky. In: Procházka, R. (ed.), *Dějiny Brna I. Od pravěku k ranému středověku*. Brno, 403–445.
- Komoróczy, B. 1999: Zpráva o výzkumu fortifikace římského krátkodobého tábora a objektů sídliště z doby římské na lokalitě Mušov-Na Pískách v letech 1995–1996. *Přehled výzkumů* 39, 1995–1996, 165–196.
- Komoróczy, B. 2002: Das römische temporäre Lager in Modřice (Bez. Brno-venkov). In: Kuzmová, K. – Pieta, K. – Rajtár, J. (Hrsg.), *Zwischen Rom und dem Barbaricum. Festschrift für Titus Kolník zum 70. Geburtstag*. Nitra, 129–142.
- Komoróczy, B. 2006: K otázce existence římského vojenského tábora na počátku 1. st. po Kr. u Mušova (Kat. Pasohlávky, Jihomoravský kraj). *Kritické poznámky z pohledu římsko-provinciální archeologie*. In: Droberjar, E. – Lutovský, M. (eds.), *Archeologie barbarů 2005*. Praha, 155–205.
- Komoróczy, B. 2008: Hradisko (Burgstall) u Mušova ve světle výzkumů v letech 1994–2007. In: Droberjar, E. – Komoróczy, B. – Vachútová, D. (eds.), *Barbarská sídliště. Chronologické, ekonomické a historické aspekty jejich vývoje ve světle nových archeologických výzkumů. Spisy Archeologického ústavu AV ČR Brno* 37. Brno, 471–519.
- Komoróczy B. 2009a: Marcomannia. Der Militärschlag gegen die Markomannen und Quaden – ein archäologischer Survey. In: *Varusschlacht im Osnabrücker Land GmbH – Museum und Park Kalkriese* (Hrsg.), 2000 Jahre Varusschlacht. Konflikt. Stuttgart, 114–125.
- Komoróczy, B. 2009b: Římské fortifikace na barbarském území ve středním Podunají v období markomanských válek. In: XXX. Mikulovské sympozium 2008. *Hranice na jižní Moravě a její obrana od doby římské*. Brno, 51–82.
- Komoróczy, B. 2009c: The character of the internal buildings of the Roman military bases on Burgstall at Mušov (South Moravia, Czech Republic). In: Morillo, Á. – Hanel, N. – Martín, E. (eds.), *Limes XX. 20th International Congress of Roman Frontier Studies. Anejos des Gladius* 13, Vol. 3. Madrid, 1421–1436.
- Komoróczy, B. 2010: Mušov-Burgstall, eine römische zentrale Militärbasis in Germanien zur Zeit der Markomannenkriege. In: *Varus-Gesellschaft zur Förderung der vor- und frühgeschichtlichen Ausgrabungen im Osnabrücker Land e.V.* (Hrsg.), *Rom und Germanien*. Georgsmarienhütte, 42–56.
- Komoróczy, B. – Vlach, M. 2010: Využití GIS pro výzkum římského vojenského zásahu na barbarské území ve střední Evropě v době Markomanských válek – úvod do problematiky a perspektivy. In: Beljak, J. – Březinová, G. – Varsík, V. (eds.), *Archeológia barbarov 2009. Hospodárstvo Germánov. Sídliiskové a ekonomické štruktúry od neskorej doby laténskej po včasný stredovek. Archaeologica Slovaca Monographiae, Communicationes*, Tomus X. Nitra, 247–289.
- Komoróczy, B. – Vlach, M. 2017: Archeologická stopa (vel)moci na nepřátelském území. *Živá archeologie – REA* 19, 35–41.
- Komoróczy, B. – Vlach, M. 2018: Viae militares a modelování vybraných prostorových aspektů římsko-barbarských konfrontací na území středodunajského barbarika. In: Martínek, J. (ed.), *Cesty v interdisciplinárním kontextu. Vlastivědný věstník moravský – supplementum*. Brno, 7–34.
- Komoróczy, B. – Vlach, M. 2019: Römische Lager im mittleren Donauraum als geographisch, militärstrategisch und kulturell definierte Orte der Mobilität. *Siedlungsforschung* 36, 21–58.
- Komoróczy, B. – Vlach, M. – Hložek, M. 2014: Detektorový nález římsko-provinciálního prolamovaného kování z Pavlova, Jihomoravský kraj. In: Čižmářová, J. – Venclová, N. – Březinová, G. (eds.), *Moravské křižovatky – Střední Podunají mezi pravěkem a historií*. Brno, 767–784.
- Komoróczy, B. – Vlach, M. – Hüssen, C. M. – Lisá, L. – Lendáková, Z. – Groh, S. 2014: Projekt interdisciplinárního výzkumu římských krátkodobých táborů ve středním Podunají. In: Komoróczy, B. (ed.), *Sociální diferenciacie barbarských komunit ve světle nových hrobových, sídlištních a sběrových nálezů (Archeologie barbarů 2011)*. Spisy AÚ AV ČR Brno. Brno, 339–364.
- Komoróczy, B. – Vlach, M. – Hüssen, C.-M. – Rajtár, J. 2019: Absolutchronologische Daten aus römischen Temporären Lagern im markomannischen Siedlungsraum im Mitteldonauegebiet. In: M. Karwowski – B. Komoróczy – P. Trebsche (Hrsg.), *Auf den Spuren der Barbaren – archäologisch, historisch, numismatisch (Archäologie der Barbaren 2015)*. Brno, 151–183.

- Komoróczy, B. – Vlach, M. – Rajtár, J. – Hüssen, C.-M. in print: The Latest Discoveries and Research Results of the Roman Military Presence in Middle Danube Barbaricum. Proceedings of the 24. International Roman Frontier Conference in Viminacium 2018.
- Komoróczy, B. – Vlach, M. – Zelíková, M. 2017: Dokumentace, publikace a interpretace detektorových nálezů na příkladu spon typu Jobst 4F. In: Droberjar, E. – Komoróczy, B. (eds.), Římské a germánské spony ve střední Evropě (Archeologie barbarů 2012). Spisy Archeologického ústavu AV ČR Brno 53. Brno, 31–61.
- Komoróczy, B. – Vlach, M. – Zelíková, M. – Sedláček, J. – Růžičková, P. 2019: Revize stavu archeologických komponent v trati Drnholec „Holenická pole“ pomocí prospekčních a málo invazivních výzkumných metod. Přehled výzkumů 60/2, 9–56. Citace: Komoróczy, B. – Rajtár, J. – Vlach, M. – Hüssen, C.-M. 2020: 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. Spisy Archeologického ústavu AV ČR Brno 61 – Lubelskie Materiały Archeologiczne TOM XVII. Brno – Lublin. 173–254.
- Kovács, P. 2005: Marcus Aurelius esőcsodája és a markomann háborúk. Specimina Nova Supplementum V. Pécs.
- Kovács, P. 2006: Fontes Pannoniae Antiquae ab A. D. CLXVI usque ad A. D. CXCII. Budapest.
- Kuzmová, K. – Rajtár, J. 1986: Anfänge des Römerlagers in Iža. Archeologické rozhledy 38, 358–377.
- Mommsen, Th. 1896: Der Marcomannen-Krieg unter Kaiser Marcus. In: E. Petersen – A. von Domaszewski – G. Calderini (eds.), Die Marcus-Säule auf Piazza Colonna in Rom. München, 21–28.
- Petersen, E. – von Domaszewski, A. – Calderini, G. (eds.) 1896: Die Marcus-Säule auf Piazza Colonna in Rom. München.
- Rajtár, J. 1994: Waffen und Ausrüstungsteile aus dem Holz-Erde-Lager von Iža. In: van Driel-Murray, C. (ed.), Military equipment in context. Proceedings of the Ninth International Roman Military Equipment Conference, JRMES Vol. 5. Leiden, 83–95.
- Rajtár, J. 2014: Stĺp Marca Aurelia a archeologické doklady o rímskych výpravách proti Kvádom. In: Bartík, J. (ed.), Stĺp Marca Aurelia a stredné Podunajsko. Studie. Zborník Slovenského národného múzea – Archeológia Supplementum 8. Bratislava, 107–140.
- Schmitt, M. T. 1997: Die römische Außenpolitik des 2. Jahrhunderts n. Chr. Friedenssicherung oder Expansion? Stuttgart.
- Strobel, K. 2001: Die „Markomannenkriege“ und die neuen Provinzen Marc Aurels: Ein Modellfall für die Verflechtung von Innen- und Außenpolitik des Römischen Reiches. In: Carinthia romana und die römische Welt. Festschrift für Gernot Piccottini zum 60. Geburtstag. Klagenfurt, 103–124.
- Šedo, O. – Knápek, R. 2019: Mušov-Neurissen 1993–1994. Nálezové kontexty z doby římské. Spisy Archeologického ústavu AV ČR Brno 63. Brno.
- Tejral, J. 1986: Neue Erkenntnisse zum römischen Stützpunkt am Burgstall bei Mušov in Südmähren. Archeologické rozhledy 38, 395–410.
- Tejral, J. 1992: Die Probleme der römisch-germanischen Beziehungen unter Berücksichtigung der neuen Forschungsergebnisse im niederösterreichisch-südmährischen Thayaflussgebiet. Bericht der Römisch-Germanischen Kommission 73, 378–468.
- Tejral, J. 1994a: Die archäologischen Zeugnisse der Markomannenkriege in Mähren – Probleme der Chronologie und historischen Interpretation. In: Friesinger, H. – Tejral, J. – Stuppner, A. (Hrsg.), Markomannenkriege – Ursachen und Wirkungen. Spisy Archeologického ústavu AV ČR Brno 1. Brno, 299–324.
- Tejral, J. 1994b: Römische und germanische Militärausrüstungen der antoninischen Periode im Licht norddanubischer Funde. In: Carnap-Bornheim, C. von (Hrsg.), Beiträge zu römischer und barbarischer Bewaffnung in den ersten vier nachchristlichen Jahrhunderten. Marburger Kolloquium, Marburg-Lublin, 27–60.
- Tejral, J. 1999: Zum Stand der archäologischen Forschung über den römischen militärischen Eingriff in Gebieten nördlich der Donau. Přehled výzkumů 39, 1995–1996, 81–164.
- Tejral, J. 2008: Ke zvláštnostem sídlištního vývoje v době římské na území severně od středního Dunaje. In: Droberjar, E. – Komoróczy, B. – Vachútová, D. (eds.), Barbarská sídliště. Chronologické, ekonomické

- a historické aspekty jejich vývoje ve světle nových archeologických výzkumů. Spisy Archeologického ústavu AV ČR Brno 37. Brno, 67–98.
- Tejral, J. 2014: Re-evaluated but still enigmatic – the Roman site at „Burgstall“. In: Römisch-Germanisches Zentralmuseum (Hrsg.), *Honesta Missione. Festschrift für Barbara Pferdehirt. Monographien des Römisch-Germanischen Zentralmuseums*, Band 100. Mainz, 221–248.
- Vích, D. et al. 2018: D. Vích – M. J. Biborski – M. R. Biborski – J. Jílek – J. Stępiński – J. Martínek: Nálezy mečů protohistorického období z Křenova na Svitavsku, *Archeologické rozhledy* 70, 526–553.
- Vích, D. – Jílek, J. 2016: Hrob nebo depot? Nález z doby římské u Jevíčka (okr. Svitavy). *Archeologické rozhledy* 68, 363–380.
- Vlach, M. 2016: Projevy římsko-germánských konfrontací na Moravě na základě geoinformačních analýz. Dissertation manuscript. Bratislava – Nitra.
- Wolff, H. 1994: Die Marcus-Säule als Quelle der Markomannenkriege. In: H. Friesinger – J. Tejral – A. Stuppner (Hrsg.), *Markomannenkriege – Ursachen und Wirkungen. Spisy Archeologického ústavu AV ČR Brno 1. Brno*, 73–83.
- Zwicker, W. 1941: *Studien zur Markussäule*. Bd. 1. Amsterdam.

Eduard Droberjar
Katedra archeologie, Filozofická fakulta UHK
Rokitanského 62
500 03 Hradec Králové
droberjar@seznam.cz

Balázs Komoróczy
Archeologický ústav AV ČR, Brno, v. v. i.
Čechyňská 363/19
602 00 Brno
komoroczy@arub.cz

Marek Vlach
Archeologický ústav AV ČR, Brno, v. v. i.
Čechyňská 363/19
602 00 Brno
vlach@arub.cz