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RECENT DEVELOPMENTS IN THE FORT OF BOLOGA AND ON THE NORTHWESTERN DACIAN LIMES

FELIX MARCU*, GEORGE CUPCEA**

Keywords: Dacia, limes, praetorium, fort, archaeological topography, Roman army, burgus, tower

Abstract: *Limes dacicus* is a fundamental reflection and study subject for Romanian ancient history and archaeology. Large-scale research has debuted by mid-19th century, developing to a decently advanced state until the present day. The northwestern part, especially that in the vicinity of the fort at Bologa, is, not by chance, one of the best-known sectors of the Dacian *limes*. Once archaeological research has been restarted, in 2012, in the fort, and through research projects financed in this field, the authors updated, documented and processed most of the data regarding the subject. On one hand, the commander's house in the fort reveals a most interesting architectural approach used to erect the intended prototype of a Mediterranean residence, on the other hand, the Roman frontier in the area is a complex system of watchtowers, fortlets and linear fortifications which seem to ensure a rather efficient surveillance and communication in the area. The frontier system in the area was designed mostly with traffic control purposes, being therefore 'mostly bureaucratic than strategic in purpose'.

Cuvinte-cheie: Dacia, limes, praetorium, castru auxiliar, topografie arheologică, armată romană, burgus, turn

Rezumat: *Limes dacicus* este un subiect de reflecție și studiu fundamental al istoriei antice și arheologiei românești. Cercetările la scară largă au debutat după jumătatea secolului al XIX-lea, dezvoltându-se la un nivel destul de avansat până în prezent. Zona de nord-vest, cu precădere cea din vecinătatea castrului de la Bologa, este, nu întâmplător, unul dintre cele mai bine cunoscute sectoare ale *limes*-ului dacic. Odată cu reînceperea cercetărilor arheologice în castrul de la Bologa și cu finanțarea de proiecte pe aceasta temă, autorii au adus la zi, documentat și prelucrat cea mai mare parte a datelor privitoare la acest subiect. Pe de o parte, reședința comandantului unității din castru ne dezvăluie o deosebit de interesantă abordare arhitecturală pentru a realiza prototipul de casă mediteraneeană intenționat, iar pe cealaltă parte, frontiera romana în zona de la Bologa este un sistem complex de turnuri, *burgi* și fortificații liniare, care par a asigura o supraveghere și o comunicare cât mai eficientă în zonă. Sistemul de frontieră din această zonă a fost instituit, mai ales, în scopul de control al traficului din și din afara provinciei, fiind mai mult „burocratic decât strategic”.

PREVIOUS WORK ON THE FRONTIER

The Roman frontier in this sample study is theoretically the best-known *limes* sector (fig. 1), under research since the second half of the 19th century. The northwestern frontier is a complex system formed of a turf rampart, watchtowers, a large fort and some fortlets. In spite of the efforts from the last hundred years or so, the gaps still persist, including in the matter of tower localization. For this reason, following field surveys and interdisciplinary analysis, we will attempt to present our conclusions regarding the towers' localisation and the Roman strategy in a rough frontier area¹.

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¹ For detailed information on the exact position of each tower and fortlet, see Marcu, Cupcea 2013, where much of the information used in this paper has been published.

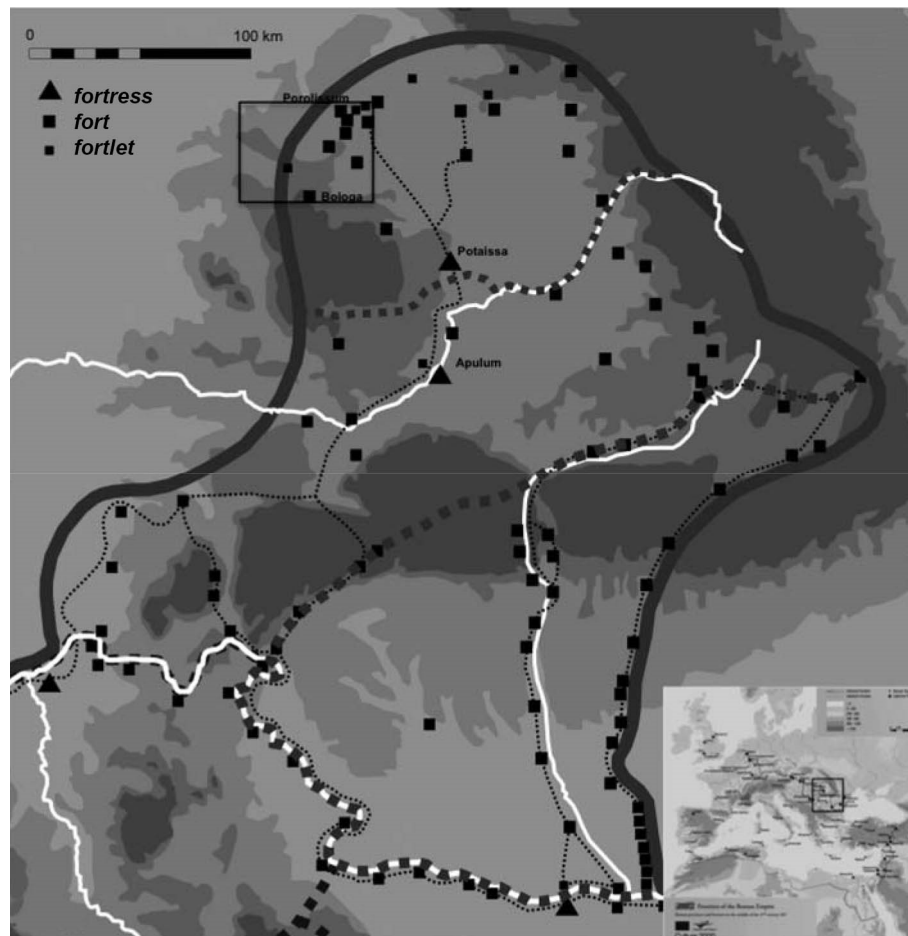


Fig. 1. Map of Dacia.

The first relatively large-scale account regarding the Roman frontier of Dacia appeared after mid-19th century, when C. Torma identified the first elements of the northwestern *limes*: towers, fortlets and strips of rampart², using in premiere the term *limes Dacicus*³. Th. Mommsen and A. von Domaszewski had doubts about the existence of this artificial *limes*, the latter arguing for a frontier in the Talsperren system⁴, and consequently this idea is abandoned by T. Ortway and F. Rómer⁵. G. Finály questioned its Roman features, in spite of the finds⁶. Since 1910, Torma's path was followed by A. Buday, who identifies his predecessor's finds, and covers a broader area, towards Porolissum, therefore becoming one of his supporters. E. Fabricius came in the same path, emphasising the idea of a continuous turf wall from the north of the province to the Danube⁷. In the interwar period, C. Daicoviciu surveyed the same area and argued that, except for some portions, there is no continuous *limes* line⁸. By 1940, A. Radnóti uses in premiere aerial photography for the identification of the frontier in the area of the Meseş Mountains, again arguing unsuccessfully for a continuous *limes*⁹. Between the 40's and the 60's, the *limes* matter was taken

² Torma 1880.

³ Assuming that the entire western *limes* is made of towers, fortlets and a continuous turf wall, Torma 1863, p. 37.

⁴ Even from as early as 1893, A. von Domaszewski considered the complexity of the Dacian defensive system as "...das Werk des grössten militärischen Talentes unter den römischen Caesaren" (Domaszewski 1893, p. 242). See also Fabricius 1926, col. 642.

⁵ Ortway 1875; Rómer 1875.

⁶ Finály 1904, p. 9-15.

⁷ Fabricius 1926.

⁸ Daicoviciu 1933-1935, p. 255-256, 303-304.

⁹ Radnóti 1944-1945, *passim*.

over by I. Ferenczi, who identified many new features and also considered the terrain's geomorphology¹⁰. Beginning with 1965, N. Gudea has started tracing the matter of the Dacian *limes*, who also excavated some of the towers. He agrees in principle with Ferenczi, but adds fresh knowledge.

Far better researched are the auxiliary forts, part of the *limes* system, with data concerning their internal planning and chronology¹¹.

The first researcher to divide the *limes* into sectors was C. Torma¹², followed by Ferenczi in 1967¹³, and thereafter by N. Gudea¹⁴. The first division comprises four sectors, the first one extending from Bologa to Porolissum area, with an illogical sequence of 20 towers¹⁵. In 1967, I. Ferenczi divides the northwestern *limes* into six sectors, from east (Tihău) to west and southwest (Bologa), according to the control area of a fort¹⁶. N. Gudea takes over this division, but adds the tower sequence from southwest to northeast, from the river Criș to the river Someș, gathering them into five sectors, in the manner of I. Ferenczi.

The last large-scale initiative for the *limes* research in this region belongs to A.V. Matei, who has identified many portions of stonewall frontier.

More recently, regarding the advanced frontier to the north, researches have been conducted in the areas of Zalău and Supuru de Sus, which have identified structures that can belong to the Roman defence system, however without any precise dating¹⁷.

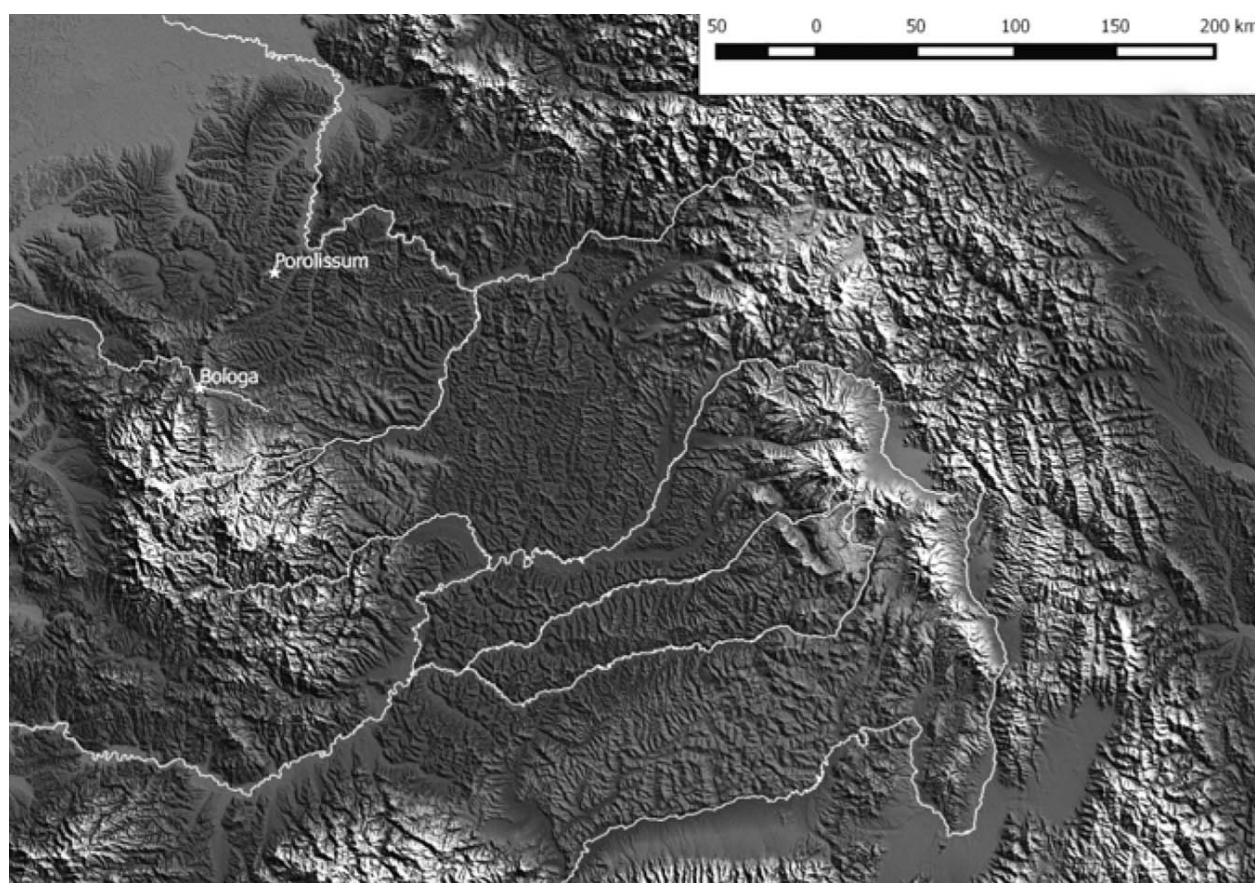


Fig. 2. Topographical map of the northwestern area of Dacia.

¹⁰ Ferenczi 1959, *passim*.

¹¹ For the bibliography see also Gudea 1997b and Marcu 2009.

¹² Torma 1880, p. 53-64.

¹³ Ferenczi 1967, p. 157-158.

¹⁴ Gudea 1985, p. 148.

¹⁵ Sector 1 is followed by sector 4.

¹⁶ Ferenczi 1967.

¹⁷ Matei, Gindele 2004; Matei, Gindele 2006; Matei, Pop 2006.

THE *LIMES* IN THE VICINITY OF THE FORT OF BOLOGA

The geographic limits of the Roman frontier in Dacia are not clearly established, rather often presumed and connected to archaeological sites. In the northwest, the limit of Dacia was the highland chain of the Meseş Mountains, which separates the Transylvanian basin from the Pannonian plain, between Bologa and Porolissum (fig. 2). Its top connects the Apuseni Mountains and the Eastern Carpathians, as a natural barrier, a geographical limit between the two basins, about 60 km long¹⁸.

Beside the fort of Bologa and the eleven towers, two fortlets are mentioned in the area, at Poieni and Dosu' Turcului, close to Grebăn, but no trace of their existence can be noticed nowadays (fig. 3). C. Torma described the fortlet of Poieni as having a rectangular shape (50 × 47 m)¹⁹. The structure of this portion of the *limes* is made of a complex system of watchtowers, turf walls, small forts/fortlets and the fort placed behind the frontier line, about 3 km inside and 3 km from the presumed fortlet of Poieni. The turf wall that starts from this presumed fortlet is clearly visible and well conserved. We can trace it over a length of more than 600 m, from the last of the gipsy houses, close to the above-mentioned fortlet, until the close vicinity of the watchtower on Cetăţeaua²⁰. On the other hand, it was scarcely researched archaeologically; therefore, its nature and structure remain unclear²¹.

The western frontier is rather unknown; with a single exception, no watchtower has been identified south of Bologa. The frontier line is presumed to follow the road connecting the most western of the forts, from Drobeta to Porolissum.

CHRONOLOGY

It is by now obvious that the Dacian defensive system was established in several stages, but we know little other details. Regarding the watchtowers in the northwest, some of them are rectangular, other round; some are made of stone, other of timber, although very few of the last have been discovered. The layout of several of them indicates different construction stages, as it is the case of the first two towers north of the river (Poieni 1-2)²².

We cannot establish a similar succession to the frontier in Germany, where stone towers replace timber ones gradually²³.

Based on the tile-stamp finds, we can assume that the towers and the *limes* itself were built by the auxiliary units garrisoned in the vicinity²⁴. However, both troops known at Bologa are first mentioned in Dacia military diplomas starting with Hadrian reign²⁵.

Along the stretch of 60 km, the towers are either round or rectangular, some of them being studied in detail in the 70's²⁶. An artificial line of defence was discovered only sporadically, made generally from turf wall or a narrow stonewall. The turf rampart was rarely investigated archaeologically, therefore its structure remains unclear.

Stonewalls were identified only in the vicinity of Porolissum²⁷. In gorges and vulnerable areas small fortlets were erected²⁸, attached to the *limes* wall, but to a certain distance from the turf wall, in a similar manner

¹⁸ See Ferenczi 1968, p. 78-79; Gudea 1985, p. 150-151.

¹⁹ The precise layout of the fortlet is uncertain. In the 19th century it was noticed in the garden of the baron Józika Sámuel, close to a bridge, the railway and the main road (Torma 1880, p. 53, fig. 1).

²⁰ C. Torma argues that the turf wall is connected to the fortlet and traceable over a much longer distance, until the tower of Vârful Sonului (7455 *pedes*), with portions of stone wall, cf. Torma 1880, p. 54.

²¹ Torma 1880, p. 54-55.

²² The two towers were first identified by A. Buday and presumed not contemporary (Buday 1912, p. 106).

²³ For the succession of the phases of the German *limes*, see in brief Baatz 2000, p. 9-49.

²⁴ See Gudea, 1985, p. 158. By contrast, most of the German and Raetian towers are covered with straw or shingles, tiles being discovered in only two cases, cf. Schallmayer 2010, p. 41.

²⁵ Nevertheless, the fort seems to have been built under Trajan garrisoned by Gaesati and Britons (Marcu 2009, p. 34-36), but none of theirs abbreviations have been found on the tiles in the towers.

²⁶ Gudea 1971, *passim*.

²⁷ Matei 1996. Named by the author "the Dacian Hadrian's Wall", presuming its continuous existence in the area, presentation at *The XXIst International Limes (Roman Frontiers) Congress at Newcastle upon Tyne*, 2009.

²⁸ See as an example the case of the fortlet of Ortelec (Marţian 1909, p. 349; Pop, Csok 2011).

as the watchtowers. In these passes, turf wall barriers were constructed, although lately they have been detected not only here, but also on plateaus. The watchtowers seem to draw a line, but in reality they are placed in a network, depending on terrain configuration and communication routes. The features of the northern frontier can be only partially identified in the other areas, but the arguments are scarce for the time being.

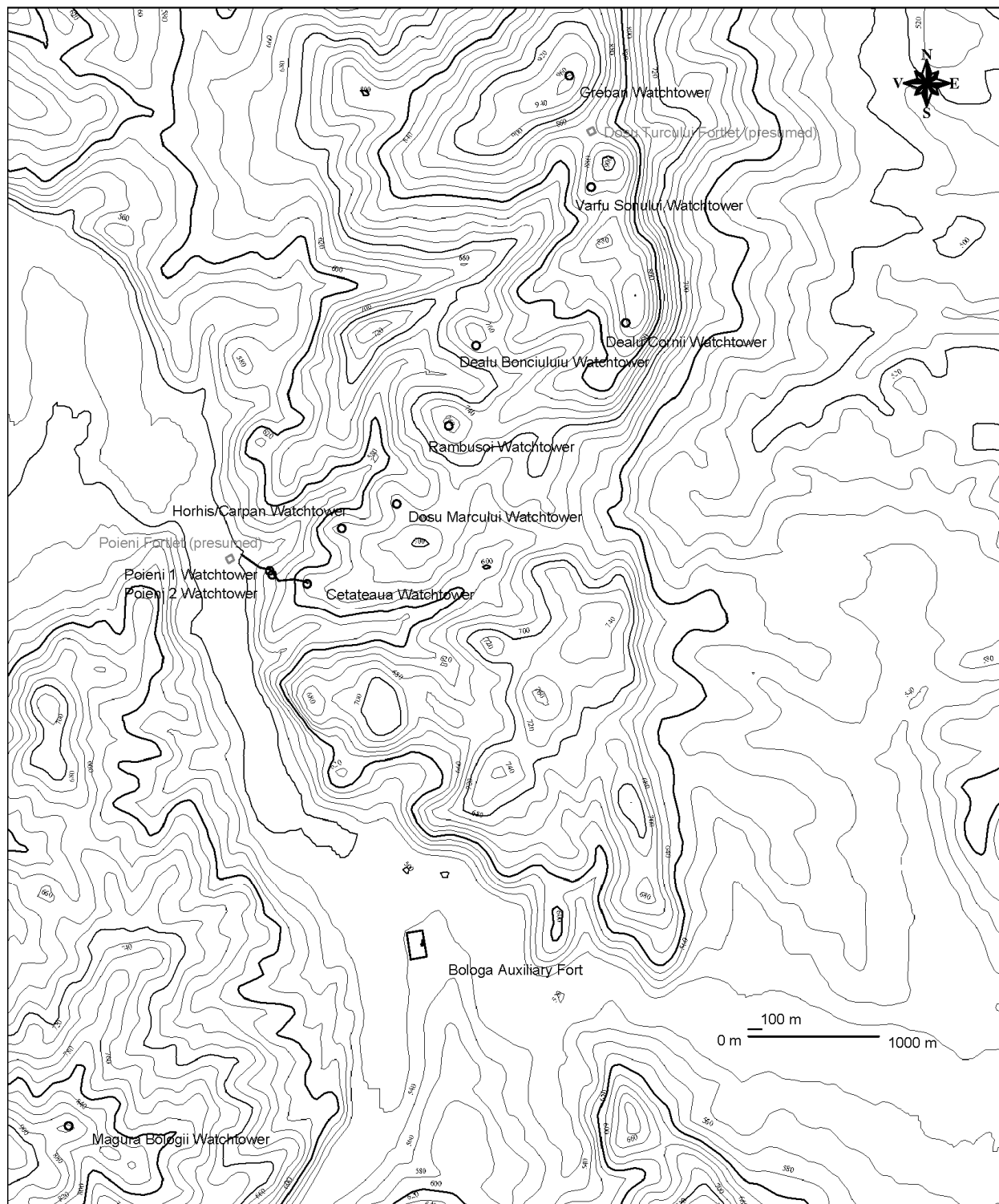


Fig. 3. Map with the Roman features in Bologa area.

TVRRES ET BVIRGI IN THE VICINITY OF THE FORT OF BOLOGA

Studies regarding the role and aspects of the watchtowers are based on very few data²⁹. Ancient sources mention them very often as *burgi*³⁰. From among them, the only ones briefly mentioning the problem of military signalling are Polybius and Vegetius, to which some of the scenes of the columns of Trajan and Marcus Aurelius can be added. The first author (Polybius X, 43-47) draws the most representative descriptions of the signalling systems, based upon a complex alphabetical pattern, a code similar to Morse, by means of torches. It is difficult to assume, however, that such a method could be used on the northern frontier, especially on the rough European terrain³¹. The system described by Vegetius (III, 5) ‘... *per noctem flamminis, per diem fumo...*’, was probably more accurate, although more complex systems for the layout of the watchtower network are presumable. The scenes I, 4 and II, 5-6 of Trajan’s column indicate something rather similar, the system being established on visual communication³². We must not exclude, however, the acoustic method, very familiar to the Romans, by the means of *tuba* and *cornu*³³. Moreover, the discovery of a ‘Mundstück/mouthpiece’ from a blow horn in watchtower Wp. 4/18, on the German *limes*, is another argument in favour of this approach³⁴.

It is certain that the Romans also used messengers, on foot or horse, as transmitters as in the case of military intelligence gathering before any attack³⁵.

The chosen study covers an area 9 km long, the most distant watchtower from the fort being situated at 6.75 km. We initiated this analysis in the area of Bologa, the theoretically best-known *limes* sector in Dacia, representative for the entire northern *limes* concerning the topography.

The last scholar approaching this sector was N. Gudea, giving general descriptions of the geographic area and results of the archaeological research conducted in most of the towers. Their identification on the ground is rather difficult, considering terrain configuration and the alterations in landscape and the toponymy. The previous geographic descriptions were not enough even for N. Gudea in the 60’s and the 70’s³⁶, as they were neither for us, even after the archaeological research³⁷. Finally, we managed to cover the area around the fort of Bologa, recording in ST 70 topographic projection all the elements composing the Roman frontier: the fortlet of Poieni, the turf wall and the watchtowers, with few exceptions. We could not identify the fortlet of Poieni, visible only to C. Torma³⁸, the one of Dosu’ Turcului, and the watchtowers of Dealul Cornii and Son.

Our analysis concerns the towers that were first researched and published by N. Gudea more than forty years ago³⁹. We relied upon his descriptions, as the most precise, but also on those of the earlier authors, beginning with C. Torma. Their conclusions were generally correct.

²⁹ For the terminology used in Roman times, see Baatz 1976, p. 28-31. For the general role of watchtowers, see Donaldson 1985; Woolliscroft, Hoffmann 1991; Woolliscroft 1989; Woolliscroft 1991; Woolliscroft 1997.

³⁰ Of some importance is the altar discovered in watchtower Wp. 10/37 on the Odenwald *limes*, dedicated to Jupiter, mentioning that *coh. I Sequanorum et Rauricorum ... ob burgum explicitum* (CIL XIII 6509).

³¹ The Greek author is contested first by G.H. Donaldson, who mentions that Polybius was a *hipparchus* in the entourage of Scipio Aemilianus during the siege of Carthage, in 147-146 BC, long before any Roman frontier was established, presuming that the transmitters and receivers were literate men (Donaldson 1985, p. 21-22).

³² Cichorius 1900, Taf. IV, V. For discussions on how torches were used, (Scene II, 5-6) and close-packed square pile of logs and straw ricks (Scene I, 4) see Baatz 1976, p. 48; Donaldson 1985, p. 20-21; Woolliscroft 1989, p. 8.

³³ The risk of wrong visual messages was higher; therefore, some authors incline towards acoustic ones (Donaldson 1985, p. 21).

³⁴ Other means of signalling are mentioned, as the red flag method, used by Scipio at Numantia (134-133 BC), acoustic methods being preferred in low visibility conditions (cf. Baatz 1976, p. 48, Abb. 31).

³⁵ Amm. Marcellinus XXVIII, 3, 8.

³⁶ N. Gudea drew attention on landscape and toponymy alteration from the time of the first researches until the 60’s and the 70’s (Gudea, 1985, p. 148).

³⁷ See Gudea 1971, *passim*.

³⁸ Torma 1880, p. 53-54.

³⁹ Gudea 1971, *passim*, fig. 1. A. Buday argues that also C. Torma surveyed the area only up to the Son (Buday 1912, p. 108).

N. Gudea describes in detail the watchtowers in the area, noticing the general rectangular layout, with the exception of the round one from Dealul Bonciului⁴⁰. Based on this data, N. Gudea argues for five-meter tall towers, 2.5 m for each level⁴¹.

The same author noticed their preferred position as being not on the hilltop, but slightly lower towards east, for reasons of wind protection⁴². The only exception is the tower from Râmbușoi placed exactly on the hilltop, on its southern edge. It is difficult to draw typologies regarding their position and visibility (important characteristics for the Romans for an optimal surveillance of the area), considering that a healthy human eye can see in a decent manner as far as 2 km⁴³.

The fort had no defensive role whatsoever, as we can deduce from its much reduced visibility, limited to a small strip to the east, along the Criș valley, and to another strip of 5 km towards west and southwest and to 10 km towards south.

For this analysis we gathered similar data for the eleven identified watchtowers, from the one on Măgura Bologii to the one on Grebăn, with the succession of the others: Poieni 1, Poieni 2, Cetățea, Horhiș, Dosu Marcului, Râmbușoi, Dealul Bonciului, Dealul Cornii, Vf. Sonului and Dealul Grebăn.

The very few recent such visibility analysis⁴⁴ are based on the data of D. Baatz regarding the German towers Wp. 10/8 and Wp. 10/9, where a minimum height of 7.6 m for the observation stand is used⁴⁵. In light of the most recent research regarding timber watchtowers reconstruction, three levels are presumed, with heights of 3, 3.6 and 2.8 m, counting for a maximum height of 11.5 m, and of the observation platform of 8 m⁴⁶. The tower reconstructions first proposed by D. Baatz include two types, with and without platform, the latter having signalling windows⁴⁷. For this reason, we chose for our analysis the parameters of a 20 km visibility radius of and eight-metre high towers, finding that the previously suggested height of only 5 m, by N. Gudea, is insufficient, many towers remaining outside the visibility radius⁴⁸.

Under these circumstances, the main features of watchtower positioning is that they lay precisely at the edge of the visibility area, even tangential on the circle defined by the observation area, being obvious that this was intended by the Romans. In a similar way, D. Wooliscroft applies for the towers on Hadrian's Wall the two 'rules of thumb', 'each Stanegate site tends to be at the eastern limit of the field of view of its western neighbour'⁴⁹.

The position of the watchtower from Râmbușoi is somewhat different from the others, as it lays exactly on the top of the hill, probably built later, at the same time with the watchtower Poieni 2, which would otherwise have remained invisible for the towers to the north⁵⁰. We noticed that, generally, the watchtowers have complementary visibility areas; therefore, the remaining ten were probably contemporary.

The positioning pattern for the watchtowers in the area of Bologa, and probably also in the other areas, is the establishment of visibility limits between towers, at heights of at least 8 m, the visible area from one tower including the invisible areas from the other. The orientation of most of them, especially those on high hilltops, was to the interior of the province. It is hard to say how the Romans established the visibility limits before the tower was erected, considering that, in most cases, the visibility was significantly reduced from the ground level. It is yet another proof of the Roman engineering genius, which needed no modern support equipment. It is obvious that signals were dispatched from the top levels, either by torch

⁴⁰ Gudea 1971, p. 508-517.

⁴¹ Gudea 1985, p. 156.

⁴² Gudea 1985, p. 152-153.

⁴³ G.H. Donaldson considered the signalling ability of the watchtowers as being extremely reduced (Donaldson 1985, p. 24).

⁴⁴ See for example Schallmayer 2010, p. 41.

⁴⁵ Baatz 1976, p. 37.

⁴⁶ Huther 2012, p. 8, Abb. 5.

⁴⁷ The tower without platform is reconstructed after a tower preserved at Messene in Peloponnese (Baatz 1976, p. 39, Abb. 21), but dating much too early, from the 4th century BC, to be eligible for analogies with the towers of the northern frontier of the Roman Empire. For the reconstruction of both of these types, see also Huther 2012, p. 82-84.

⁴⁸ The model for this height was probably ORL-A, where the representatives of the Reichs-Limeskommission established heights of 5-6 m.

⁴⁹ The second rule was the erection of Hadrian's Wall to the northern visibility area (Wooliscroft 1989, p. 13).

⁵⁰ Marcu, Cupcea 2013, p. 582.

or acoustics (when weather was bad, which is often the case in this area). Just as important was the direct dispatch, through runners and horsemen.

We are dealing with a lateral system of message dispatch, less efficient⁵¹, but the only one applicable in the landscape of Bologa and the Dacian *limes* in general. The towers are mutually visible with their neighbours but have no possibility of dispatch directly to the fort they belong to, or to any intermediary towers of other forts⁵². In the case of Dacia, the *limes* is influenced by terrain configuration, and runs from high point to high point, but not randomly. The biggest weakness of the system was its dependence to a strategic point. If someone wished to destabilise the communication with the fort, he would simply need to annihilate the relay on Măgura Bologii, the only tower in direct communication with the fort (from what we know at this moment)⁵³.

For this reason, the system in the area of Bologa was mostly designed for traffic reconnaissance and monitoring; as other sectors, it was 'more bureaucratic than strategic in nature'⁵⁴. It was not destined to be impenetrable, since the area in front of the Bologa fort was probably not heavily inhabited during the Roman period. In spite of these appearances, we must not ignore the importance of the Roman frontier and attempt to understand why the northern sector was starting from this point onwards. The Romans would not have invested such energy in its erection here if proven inefficient. They must have chosen the best system adaptable to the area, for the dispatch of information as quickly and inexpensive as possible, at the same time under heavy protection.



Fig. 4. Bologa auxiliary fort.
Digital elevation map and topographic plan
of the excavations 2012-2013.

⁵¹ D. Woolliscroft concludes that this lateral system identified also in the southern half of the German-Raetian *limes* had no military role, but was used due to the heavy forest that must have been present in the area in Antiquity, unlike the system identified in its northern half and on Hadrian's Wall (Woolliscroft 1995, p. 596).

⁵² As in the case of Hadrian's Wall (cf. Woolliscroft 1989, p. 15).

⁵³ Marcu, Cupcea 2013, p. 576-578.

⁵⁴ See Woolliscroft 1997, p. 601.

PREVIOUS WORK DONE IN THE FORT

The auxiliary fort of Bologa (Poieni, Cluj County) is placed on the northwestern Dacian border, on the left bank of the river Crișul Repede, between the villages of Morlaca and Poieni. The fort lays on a high terrace in the proximity of the Săcuieu Stream's flowing into the Criș River (fig. 4). The valley of Crișul Repede is the connection between the Transylvanian plateau and the Western Plain of Theiss River, which is why the strategic role of the fort is theoretically to protect the *limes* against any Barbarian tribes west of the province, or, more probably to monitor traffic and commerce.

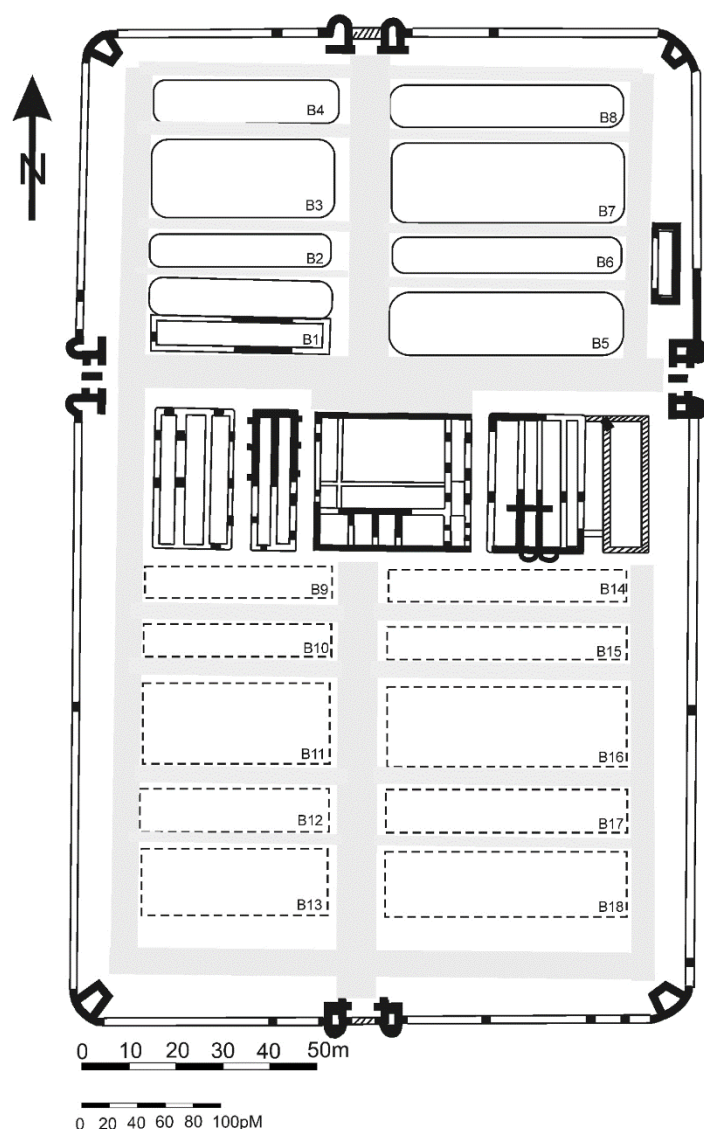


Fig. 5. Layout of the fort
(after Gudea 1997c, no. 22).

Based on an inscription (CIL III 8060) discovered at Almașu Mare, close to the locality Bologa, on the road to Sutoru – *Optatiana*, the place name was initially completed to *Resculum* (TIR L 34, p. 196)⁵⁵. It is, however, more probable that the actual place name was *Rucconium*⁵⁶.

The fortification has been in a first phase smaller, of about 160 × 125 m in size⁵⁷, enlarged probably sometime before AD 123⁵⁸, the year of the first mention of *coh. I Aelia Gaesatorum* in Dacia Porolissensis or, when *coh. II Hispanorum* is moved to Bologa, i.e. before AD 154⁵⁹.

The fort is rectangular in shape, with *porta praetoria* facing north (fig. 5)⁶⁰. All of the stone gates are provided with semi-circular projected towers to be dated to the early Severan period, but only *portae principales* are double. However, *praetoria* and *decumana* seem to be large enough in size⁶¹. The last ones are not exactly on the axis of the fort, but 10.00 m closer to the western enclosure, therefore the buildings in *praetentura dextra* and those from *retentura dextra* are longer than

⁵⁵ For the discussion referring to the locality name see Torma 1880, p. 11-59; Macrea 1969, p. 154-155; Gostar 1969, 175-176; IDR I, p. 188; Bogdan-Cătănciu 1981, p. 51; Bogdan-Cătănciu 1991, p. 63-64; Wollmann 1996, p. 67; Gudea 1997c, p. 8-9, 48.

⁵⁶ See discussion in Bogdan-Cătănciu 1991, p. 63-64; Nemeti 2006, p. 281; Ardevan, Zăgreanu 2012, p. 78-79.

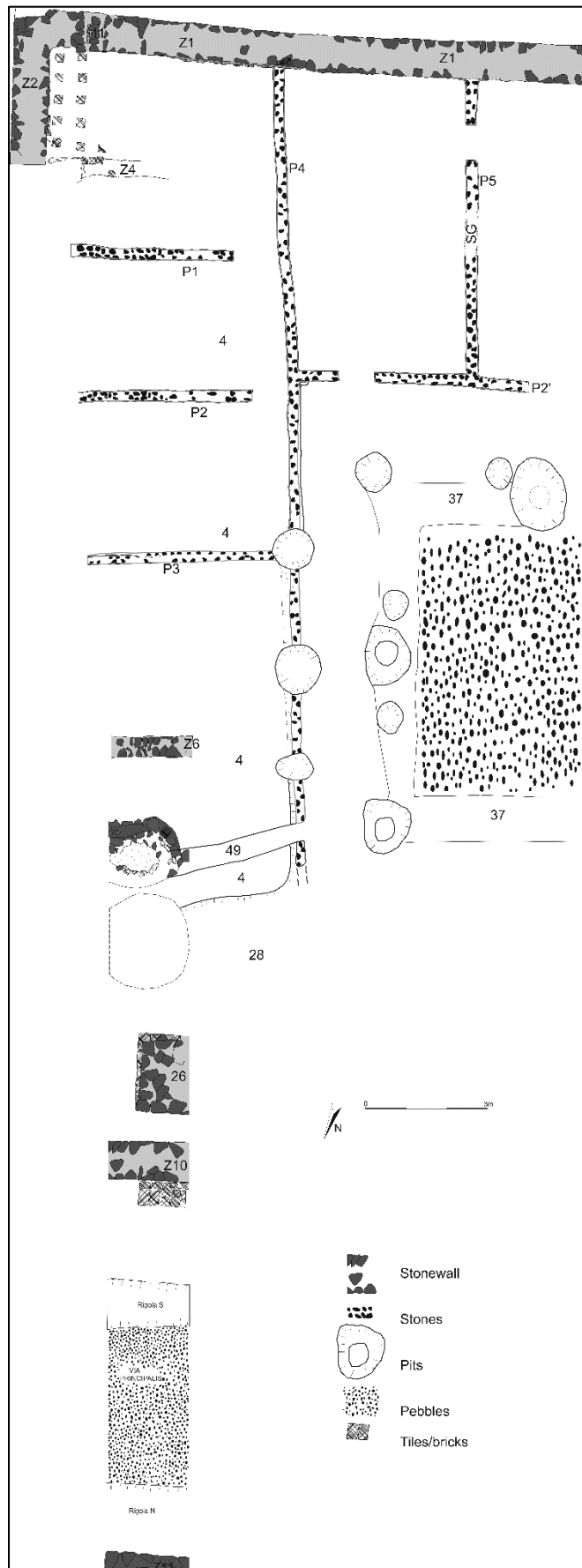
⁵⁷ Gudea 1997c, p. 17.

⁵⁸ See the military diplom (Eck, Pangerl 2011).

⁵⁹ N. Gudea supposes the enlargement of the fort to 125 × 235 m in 125-126 AD, date when the troop of *Gaesati* arrives here (Gudea 1997c, p. 26). *Coh. II Hispanorum* might be mentioned on the diploma of AD 128, yet it is preserved only the numeral (see Ciongradi, Bota, Voișian 2009).

⁶⁰ For the interesting planning of the interior see Marcu 2009, p. 26-28.

⁶¹ See Gudea 1997c, p. 33-34.



the buildings in *sinistra* section of the fort⁶². This might suggest a clear separation of the fort internal planning, a half (*sinistra*) occupied by one troop and the second half (*dextra*) by the other troop in garrison⁶³. *Cohors I Aelia Gaesatorum* was *milliaria* unit⁶⁴, at least in the 2nd century, while *cohortes II Hispanorum* was a *quingenaria equitata*⁶⁵. Parcelling out the fort was dependent by the type of garrison.

Clearly, the central building in the fort is *principia*. Almost the entire central part (*latus*) was destroyed by the stone robbers in modern times. The only visible remains are the wall foundations, and N. Gudea restored the plan accordingly. In *latus sinistrum* there are two buildings resembling storehouses, and in *dextrum* a large building (20 × 28.50 m), designated as commandant's house. However, the plan appeared as very strange⁶⁶.

Fig. 6. Excavated area of the *praetorium*. Layout of the main phase of the building.

THE GENERAL LAYOUT OF THE *PRAETORIUM*

The commandant's house was partially researched by N. Gudea; it lays 4 m east to the *principia* on an area of 570 sq.m⁶⁷. It is longitudinally divided into four sectors. Two of them are closed in the back with semi round apses. Heating systems were identified in two of these rooms, and a brick floor in another one.

The history of the building cannot be followed in any detail. Dating evidence is largely lacking. A single main phase of the building was identified through excavation, to which an annex will be added sometime in the 3rd century AD. A previous phase can be

⁶² See details in Marcu 2009, p. 27-28.

⁶³ Marcu 2009, p. 28.

⁶⁴ Registered as such in military diplomas. However, the only known commander is a *paefectus* (CIL III 7648), therefore it could have been reduced in size at some point.

⁶⁵ See Marcu 2009, p. 34-36 with bibliography.

⁶⁶ Gudea 1997c, p. 38-39.

⁶⁷ A short description of the building in Gudea 1997c, p. 38-39. The plan is inaccurate in detail, but correct only regarding the dimensions, showing a house with parallel hall-like structures.

presumed due to the richness of the layer beneath the above-mentioned floor, but we cannot say precisely if it belonged to the *praetorium*.

During the researches started in 2012, we have found parts of two sides, south and east, of a courtyard house, generally well preserved (fig. 6). The ground fell away steeply to the west of the original building, and in its western half only wall foundations are probably to be found.

We were not able to follow the building's chronology in detail, the datable material being scarce⁶⁸. Destruction traces from ancient times are visible especially to the west, where the burning was so intense that it almost destroyed the *cocciopesto* floor.

On the southern side, at least two rooms and one not clearly limited to the west were identified. At least the first one has an under floor heating system, *hypocaustum*, extended also in the walls, the second having its plaster directly applied to the wall. The compartmental walls are identical to the ones on the eastern side, with successive plaster layers. Their elevation is evident in the first room, due to the collapse of the wall P₄ to the east, directly on the *cocciopesto* floor. It is made of successive layers of small stones, found abundantly in the hills around Bologa, and mortar identical to the plaster, sometimes mixed with clay. The compartmental walls' structure was supported on a wooden frame, of which we have found the post-holes of rectangular beams of 15 × 10 cm with an *interstitium* of 90 cm.

During this first construction phase, room no. V is similar in size to a *triclinium*, 7.35 × 4.25 m. Vitruvius (6.3.8) claims that such a room must be twice longer than wide, although this was probably not a rule. We have analogies for such a proportion; K. Dunbabin offers more than one example of *triclinia* similar in size, sufficient for this classic layout of 'three couches, to hold ideally three guests each'⁶⁹.

Nevertheless, room no. V, beside its position, has narrow entrances from the neighbouring rooms on two sides; therefore, a third couch would not be fitted along its western wall.

We have not identified any sockets for door pivots, in spite of the floor's good state of preservation; therefore, we must assume that the doors were fixed in hinges. The entrances from one room to another are clearly visible with an opening of about 0.90 m. In any case, the rooms in this area were private, used by a person or a small group of people, similar to an apartment, thus *cubiculae*⁷⁰. The most important room was the one on the southeastern corner, whose walls were also heated. Their usage as *cubiculae* is proven also by their orientation, *triclinia* opening towards the peristyle, when these are not open directly to the peristyle, rather accessible from the lobby⁷¹. The *triclinium* could probably be the apse room identified by N. Gudea, only with the position on the axis, opposed to the entrance and the apse as proof. The two adjacent apses, different in size, are however peculiar⁷².

The excavations from 2014 revealed the southeastern corner of the former courtyard. Between the rooms on the sides and the court there has been a portico 2 m in depth. The flooring of the court and portico was similar, visible as a layer of yellowish pebble. Interesting enough is that the roof of the building including the portico was supported inside the building on big posts (fig. 6).

Kitchens are mostly identified through ovens⁷³, usually placed near the *triclinium*. However, few such rooms were identified in Pompeii houses based on this rule, due to the rarity of such facilities⁷⁴. Laws on fire usage in Roman towns and cities lead us to the assumption that they regarded cooking as dangerous⁷⁵. This may be the reason why in Bologa ovens were placed in the interior courtyard of the

⁶⁸ Only four coins were discovered, the earliest a Medieșu Aurit type *didrachma*, datable in the 2nd century BC, followed by a *denarius* from the time of the second triumvirate, a *dupondius* of Trajan (AD 114), and finally a *denarius* of Severus. We would like to thank C. Găzduc for the determinations.

⁶⁹ Long and narrow rooms as in Pompeii (6 × 4 m) or San Rocco (7.5 × 4.95 m) (Dunbabin 1991, p. 123-124; 1996, p. 68).

⁷⁰ Small rooms with narrow entrances, used as bedrooms, described as 'retiring rooms' (see Ellis 2000, p. 156).

⁷¹ As in Housesteads (Charlesworth 1975, p. 120, fig. 1-2).

⁷² The two apsed rooms were probably part of one, undivided space, as the walls that N. Gudea considered longitudinal compartmental limits (Gudea 1997a, p. 38-39) were, in fact, later additions.

⁷³ At Housesteads it lays in the corner (Charlesworth 1975, fig. 1).

⁷⁴ In civilian environment, a series of sources indicate that the Romans in the cities were not accustomed to eating warm cooked food, but preferred 'take aways' (Ellis 2000, p. 158-159). However, the large amount of animal bones discovered in forts prove that cooking was practiced, especially in modest households (Ellis 2000, p. 159).

⁷⁵ Most of the rules are post-Neronian, after the Great Fire (see Hermansen 1982, p. 211-213).

praetorium. Numerous such examples are found in the better-researched rural settlements of Britannia⁷⁶.

We know nothing of the role of the rectangular podium from the vicinity of these ovens, if it was an altar, statue base or something connected to cookery⁷⁷. It is, however, highly probable that it was a statue base of either a *Lar familiaris*, *Genius*, *Penates*, Vesta or other deities, usually found in cooking spaces to care of the fire. The *lararium* is also often associated to the cooking space⁷⁸. In medium residences, up to 650 sq. m (category in which falls the building of Bologa) the altars lay mostly in the gardens⁷⁹.

In Bologa we are dealing with a courtyard surrounded by rooms, but not on all sides. It is a structure fitted to an equestrian officer, representing his individual taste, according to the Roman rules and lifestyle. The building seems to have a simple layout, with one row of rooms surrounding a courtyard⁸⁰.

We cannot connect the layout changes to a particular event, but it is obvious that sometime in the 3rd century the compartmental walls collapsed, leaving place for smaller rooms (fig. 7). As the individual role of the officer was essential in the layout establishment, it is difficult to find analogies. It seems to represent a veritable villa, an example of high-quality architecture, in the sense proposed by R. Förtsch⁸¹. This is precisely why the layout varies and room functionality is difficult to establish. Even if this is one of the best preserved such buildings in Dacia, no element able to indicate room functionality was discovered. They were probably used as the commandant's private chambers, *cubiculae*, in the less noisy part of the building, heated also in the walls, at least the room on the southeastern corner. We cannot exclude room no. V as a dining room (*triclinium*) although its position, narrow doorways and the lack of a direct entrance lead us towards a *cubiculum*. As *triclinium*, it should stand directly on the building axis, although *triclinia* next to corners are no exceptions⁸².

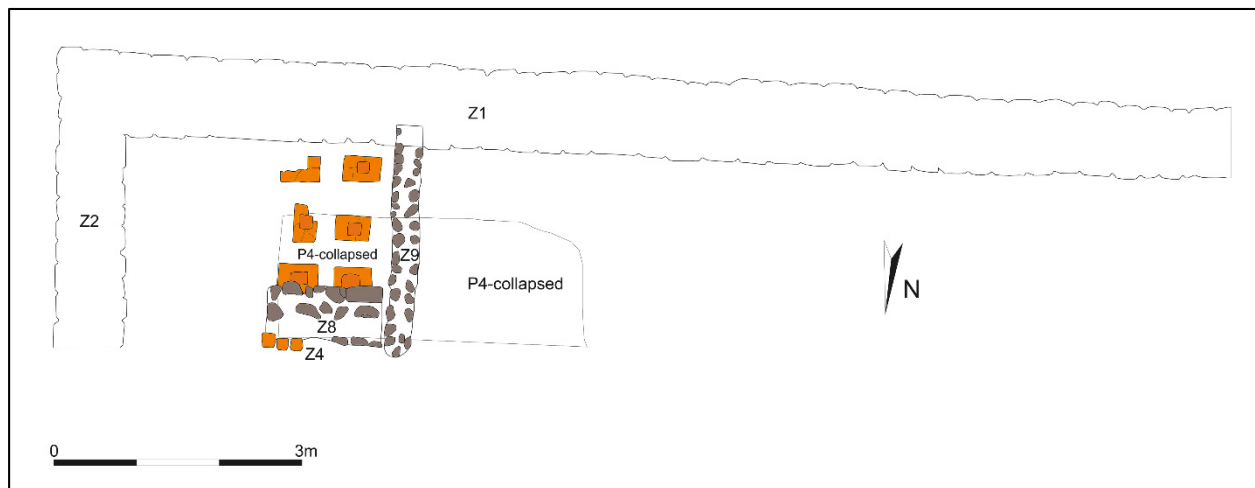


Fig. 7. Layout of later Roman phase of the building.
A second heated system used above the main floor of the structure.

⁷⁶ See Ellis 2000, p. 159.

⁷⁷ Brick pedestals were discovered in the kitchens; they were considered by some of the researchers as beds for the slaves working there, but, more probably, they were related to cooking activities (Ellis 2000, p. 158).

⁷⁸ Altars are usually associated to the kitchen, each individual organizing his space after a personalised ritual topography (cf. Foss 1997, p. 196-197). On the other hand, they are familiar in peristyle houses (see Ellis 2000, p. 37).

⁷⁹ Even if in the form of arched niches (Foss 1997, p. 207).

⁸⁰ Two rows of rooms are visible at Oberstimm, Fendoch and Housesteads (Johnson 1987, fig. 101). In the last two mentioned cases they were on the side of the entrance (see Charlesworth 1975). A complex layout with two rows of rooms on all four sides is noticeable at Wiesbaden, abandoned at the beginning of the 2nd century AD (ORL 31; Baatz 2000, p. 340-343).

⁸¹ Förtsch 1995, *passim*.

⁸² 'Reception suites in Roman houses were not always centralised' as in the very interesting *triclinium* in the villa of Lockleys, Herts, with two small adjacent rooms (Ellis 1995, p. 168, fig. 2).



Fig. 8. The last structural phase of the building (phase 3).

Glass windows and a possible *nymphaeum* in the *triclinium*, as in the large villas of the Empire, stand proof for the glamorous lifestyle⁸³. *Triclinium* may be the central room on the backside, as we were mentioning above, one of the apses being destined for the so-called *stibadium*, the other one as a *nymphaeum*.

Beginning with the 2nd century AD, a new fashion prevails in connection to the living room, *stibadium*, a curved couch replacing the traditional rectangular ones⁸⁴; therefore, one of the apses could be the place for such an installation. Fountains inside *triclinia* were identified in several cases, placed in niches of one of the walls⁸⁵, the dedication to the Nymphs discovered in this area⁸⁶ finding thus a logical explanation.

A spatial and functional distinction is thus made between the preparation of food and its consumption, and each *praetorium*, as well as each civil house, was highly idiosyncratic⁸⁷.

In a consequent phase, the Romans remake the layout in the southeastern corner of the building, or continue to use only this area, the heating system adjacent to the new room being laid on the collapsed wall of the previous room (fig. 7). From this area comes a *denarius* of Severus.

In an even later phase, probably post-Roman (fig. 8), we assume the existence of three rooms, the first between Z_1 and Z_7 – **A**, the second between Z_7 and Z_5 – **B** and the third to the west of Z_5 – **C**. Their floors appear as compact clay layers, identified in rooms A and B. In the last one, the floor is made of a layer of upside down stamped tiles, laid on the layer no. 18.

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⁸³ See Dunbabin 1991, *passim*.

⁸⁴ Dunbabin 1991, p. 131-132; Dunbabin 1996, p. 74; Ellis 2000, p. 148-150.

⁸⁵ See Ellis 2000, p. 137. In the villa of El Ruedo (Almedinilla, Cordoba) a masonry *stibadium* was later added, combined with an elaborated *nymphaeum* against the back wall, leading the water towards a basin inside the *stibadium*, then to the main garden basin (Dunbabin 1996, p. 77).

⁸⁶ Courtesy of N. Gudea.

⁸⁷ For the civil houses, see Foss 1997, p. 217.

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- Woolliscroft 1991 – D.J. Woolliscroft, *Das Signalsystem an der Hadriansmauer und seine Auswirkungen auf dessen Aufbau*, in V.A. Maxfield, M.J. Dobson (eds.), *Roman Frontier Studies 1989. Proceedings of the XVth International Congress of Roman Frontier Studies*, Exeter, 1991, p. 148-152.
- Woolliscroft 1997 – D.J. Woolliscroft, *Signalling and the Design of the German Limes*, in W. Groenman-van Waateringe, B.L. van Beek, W.J.H. Willems, S.L. Wynia (eds.), *Roman Frontier Studies 1995: Proceedings of the XVIth International Congress of Roman Frontier Studies* (Oxbow monograph 91), Oxford, 1997, p. 595-604.
- Woolliscroft, Hoffmann 1991 – D.J. Woolliscroft, B. Hoffmann, *Zum Signalsystem und Aufbau des Wetterau-Limes*, FBW 16, 1991, p. 534-44.
- Wollmann 1996 – V. Wollmann, *Mineritul metalifer, extragerea sării și carierele de piatră în Dacia romană* (BMN 13), Cluj-Napoca, 1996.

ABRÉVIATIONS

- AA – Archäologischer Anzeiger. Deutsches Archäologisches Institut, Darmstadt, München, Tübingen–Berlin
- ABSA – The Annual of the British School at Athens, Athens
- ActaArchCarp – Acta Archaeologica Carpatica, Kraków
- ActaArchHung – Acta Archaeologica Academiae Scientiarum Hungaricae, Budapest
- Acta Classica – Acta Classica. Journal of the Classical Association of South Africa, Pretoria
- ActaHistHung – Acta Historica Academiae Scientiarum Hungaricae, Budapest
- ActaMN – Acta Musei Napocensis. Muzeul Național de Istorie a Transilvaniei, Cluj-Napoca
- ActaMP – Acta Musei Porolissensis. Muzeul Județean de Istorie și Artă, Zalău
- ActaTS – Acta Terrae Septemcastrensis. Institutul pentru Cercetarea Patrimoniului Cultural Transilvănean în Context European, Sibiu
- AE – L'Année Épigraphique, Paris
- Aegean Studies – Aegean Studies. Aegeus - Society for Aegean Prehistory, Athens
- AEM – Archäologisch-epigraphische Mitteilungen aus Österreich-Ungarn, Wien
- Aevum – Aevum. Rassegna di Scienze Storiche Linguistiche e Filologiche. Vita e Pensiero – Pubblicazioni dell'Università Cattolica del Sacro Cuore
- Agria – Agria. Az Egri Múzeum Évkönyve – Annales Musei Agriensis. Dobó István Vármúzeum, Eger
- AHA – Acta Historiae Artium. Academiae Scientiarum Hungaricae, Budapest
- AHB – The Ancient History Bulletin (digital version only: <http://ancienthistorybulletin.org/>)
- AHR – The American Historical Review, Bloomington
- AIIA (Cluj-Napoca) – Anuarul Institutului de Istorie și Arheologie, Cluj-Napoca
- AInf – Archäologische Informationen, Mitteilungen zur Ur- und Frühgeschichte, Bonn
- AISC – Anuarul Institutului de Studii Clasice, Cluj-Napoca
- AJA – American Journal of Archaeology, Boston
- AJN – American Journal of Numismatics. American Numismatic Society, New York
- AJPh – American Journal of Philology, Baltimore
- AM – Mitteilungen des Deutschen Archäologischen Instituts. Athenische Abteilung, Athen
- Am. J. Phys. Anthropol. – American Journal of Physical Anthropology. Journal of the American Association of Physical Anthropologists, ([http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1096-8644](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1096-8644))
- American Anthropologist – American Anthropologist. Journal of the American Anthropological Association, ([http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1548-1433](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1548-1433))
- American Antiquity – American Antiquity. Society for American Archaeology, Washington
- ANarch – Archäologisches Nachrichtenblatt, Berlin
- AnB (S.N.) – Analele Banatului (Serie Nouă), Muzeul Banatului, Timișoara
- AnSt – Anatolian Studies. British Institute at Ankara, Ankara
- Antaeus – Communicationes ex Instituto Archaeologico Academiae Scientiarum Hungaricae, Budapest
- Anthropology Today – Anthropology Today. Royal Anthropological Institute, London
- Antiquity – Antiquity. A Review of World Archaeology, Durham, UK
- AntOr – Antiguo Oriente: Cuadernos del Centro de Estudios de Historia del Antiguo Oriente. Pontificia Universidad Católica Argentina Santa María de los Buenos Aires
- AO – Arhivele Olteniei, Craiova
- AO Moskow – Arheologicheski Otkritja, Moskva
- Apulum – Acta Musei Apulensis. Muzeul Național al Unirii, Alba Iulia
- ArchA⁵ – Archaeologia Aeliana, Fifth Series. Society of Antiquaries of Newcastle upon Tyne, Newcastle
- Archaeol. Rev. Camb. – Archaeological Review from Cambridge. University of Cambridge, Cambridge
- Archaeologia – Altum castrum online. Mátyás király Múzeum, Visegrád
- Archeometriai Műhely – Archeometriai Műhely a Magyar Régészeti és Művészettörténeti Társulat interdiszciplináris kutatásokkal foglalkozó vitaülés-sorozata, Budapest
- ArchÉrt – Archeológiai Értesítő, Budapest

- ArchHung – Archaeologia Hungarica, Acta Archaeologica Musei Nationalis Hungarici, Budapest
 ArchKorr – Archäologisches Korrespondenzblatt, Mainz
 ArchPolski – Archeologia Polski, Wrocław – Warszawa
 ArchRozhledy – Archeologické Rozhledy, Praha
 ArhMed – Arheologia Medievală. Complexul Muzeal Bistrița-Năsăud, Bistrița
 ArhMold – Arheologia Moldovei. Academia Română, Institutul de Arheologie, Iași
 ArhVestnik – Arheološki vestnik, Ljubljana
 AȘUI – Analele Științifice ale Universității “Al. I. Cuza” din Iași, Iași
 Athenaeum – Studi di Letteratura e Storia dell’Antichità pubblicati sotto gli auspici dell’Università di Pavia, Pavia
 AVANS – Archeologické Vyskumy a Nálezy na Slovensku, Nitra
 Banatica – Banatica. Muzeul Banatului Montan, Reșița
 BARBrSer – British Archaeological Reports, International Series, Oxford
 BARIntSer – British Archaeological Reports, British Series, Oxford
 BayVgBl – Bayerische Vorgeschichtsblätter. Kommission für bayerische Landesgeschichte bei der Bayerischen Akademie der Wissenschaften in Verbindung mit dem Bayerischen Landesamt für Denkmalpflege und der Archäologische Staatssammlung, München
 BCH – Bulletin de Correspondance Hellénique, Athènes–Paris
 BÉ – Bulletin Épigraphique, Paris
 BerRGK – Bericht der Römisch-Germanischen Kommission des Deutschen Archäologischen Instituts, Frankfurt am Main
 BIAUL – Bulletin of the Institute of Archaeology (University of London), London
 BIDR – Bulletino dell’Istituto di Diritto Romano, Roma
 BJb – Bonner Jahrbücher des Rheinischen Landesmuseums in Bonn, Bonn
 BMN – Bibliotheca Musei Napocensis, Cluj-Napoca
 Britannia – Britannia. Journal of the Society for the Promotion of Roman Studies, Cambridge
 BSNF – Bulletin de la Société nationale des antiquaires de France, Paris
 BSNR – Buletinul Societății Numismatice Române, București
 BUFM – Beiträge zur Ur- und Frühgeschichte Mitteleuropas, Wilkau-Haßlau - Langenweißbach
 Byzantina (Thessalonice) – BYZANTINA. Annual Review of the "Byzantine Research Centre", Thessalonice
 Byzantinoslavica – Byzantinoslavica. Revue internationale des Études Byzantines, Slovanský ústav Akademie věd ČR, Praha
 C&M – Classica et Mediaevalia: Danish Journal of Philology and History, Aarhus
 Caiete ARA – Caiete ARA. Arhitectură, Restaurare, Arheologie. Asociația ARA, București
 CCA. Campania – Cronica Cercetărilor Arheologice din România, București
 Chiron – Mitteilungen der Kommission für Alte Geschichte und Epigraphik des Deutschen Archäologischen Instituts, München
 CICSA – Centrul de Istorie Comparată a Societăților Antice, Universitatea București, București
 CIL – *Corpus Inscriptionum Latinarum*, Berlin
 CN – Cercetări Numismatice. Muzeul Național de Istorie a României, București
 ComArchHung – Communicationes Archaeologicae Hungariae, Budapest
 CQ – The Classical Quaterly, The Classical Association, Cambridge
 CRAI – Comptes Rendus des Séances de l’Académie des Inscriptions et Belles-Lettres, Paris
 Crisia – Crisia. Muzeului Țării Crișurilor, Oradea
 CSCA – California Studies in Classical Antiquity. University of California, Los Angeles
 Current Anthropology – Current Anthropology. University of California, Merced
 CW – Classical World. Temple University, Philadelphia
 Dacia – Dacia. Fouilles et recherches archéologiques en Roumanie, București
 Dacia N.S. – Dacia (Nouvelle Série). Revue d’archéologie et d’histoire ancienne. Académie Roumaine. Institut d’archéologie « V. Pârvan », București
 DIR, C, I – *Documente privind Istoria României, sec. XI–XIII, C, Transilvania, I (1075–1250)* (eds.: I. Ionașcu, L. Lăzărescu-Ionescu, B. Cămpina, E. Stănescu, D. Prodan, M. Roller), București, 1951.

- Dolgozatok Cluj – Dolgozatok az Erdélyi Nemzeti Múzeum Érem- és Régiségtárából, Kolozsvár
- Dolgozatok Szeged – Dolgozatok a M. Kir. Ferencz József Tudományegyetem Archaeologiai Intézetéből, Szeged
- EJA – European Journal of Archaeology. European Association of Archaeologists (<http://e-a-a.org/eja.htm>)
- Elbinger Jahrbuch – Elbinger Jahrbuch. Zeitschrift der Elbinger Altertumsgesellschaft und der städtischen Sammlungen zu Elbing, Elbing (1920-1941)
- EphemNap – Ephemeris Napocensis. Academia Română, Institutul de Arheologie și Istoria Artei, Cluj-Napoca
- ÉPRO – Études préliminaires aux religions orientales dans l'Empire romain, Leiden
- Études Celtiques – Études Celtiques, Paris
- Evol Anthropol – Evolutionary Anthropology. Duke University, Durham NC
- FBW – Fundberichte aus Baden-Württemberg, Stuttgart
- FHDR I-II – H. Mihăescu, G. Ștefan, R. Hîncu, V. Iliescu, V.C. Popescu (eds.), *Fontes ad historiam Dacoromaniae pertinentes*, I-II, București, 1964–1970
- File de Istorie – File de Istorie. Muzeul Județean Bistrița-Năsăud, Bistrița
- FontesArchPosn – Fontes Archaeologici Posnanienses, Poznań
- FrühMitAltSt – Frühmittelalterliche Studien. Jahrbuch des Instituts für Frühmittelalterforschung der Universität Münster, Münster
- Germania – Germania. Anzeiger der Römisch-Germanischen Kommission des Deutschen Archäologischen Instituts, Frankfurt am Main
- Glasnik SAD – Glasnik Srpskog Arheološkog Društva, Belgrad
- H-Soz-u-Kult – Kommunikation und Fachinformation für die Geschichtswissenschaften (<http://www.hsozkult.de/>)
- HambBeitrA – Hamburger Beiträge zur Archäologie. Universität Hamburg, Hamburg
- HCT – A.W. Gomme, A. Andrewes, K.J. Dover, *A Historical Commentary on Thucydides*, Oxford, Clarendon Press, 1945-1981.
- Hermes – Hermes. Zeitschrift für Klassische Philologie, Franz Steiner Verlag, Stuttgart
- Historia – Historia. Zeitschrift für Alte Geschichte, Franz Steiner Verlag, Stuttgart
- HistoriaBuc – Historia, București (<http://www.historia.ro/revista#>)
- HOMÉ – A miskolci Hermann Ottó Múzeum évkönyve, Miskolc
- Homo – HOMO. Journal of Comparative Human Biology. Australasian Society for Human Biology, Elsevier Press (<http://www.journals.elsevier.com/homo/>)
- HZ – Historische Zeitschrift, Akademie Verlag GmbH, Berlin
- IDR – *Inscriptiile Daciei romane*
- IDRE – C.C. Petolescu, *Inscriptiones Daciae Romanae. Inscriptions externes concernant l'histoire de la Dacie*, I-II, București, 1996-2000
- IG – *Inscriptiones Graecae*, Berlin
- IGLR – E. Popescu, *Inscriptiile grecești și latine din secolele IV–XIII descoperite în România*, București, 1976
- Il Mar Nero – Il mar nero : annali di archeologia e storia, Roma
- ILD – C.C. Petolescu, *Inscriptii Latine din Dacia*, București, 2005
- ILS – H. Dessau, *Inscriptiones Latinae Selectae*, Berlin, I (1892), II (1902), III (1916)
- Int J Osteoarchaeol – International Journal of Osteoarchaeology
- Istros – Istros, Muzeul Brăilei, Brăila
- JAMÉ – A Jós András Múzeum Évkönyve, Nyíregyháza
- J.Archeol.Sci – Journal of Archaeological Sciences, London – New York
- JDAI – Jahrbuch des Deutschen Archäologischen Instituts, Deutsches Archäologisches Institut, Berlin
- JEA – Journal of European Archaeology, former name of EJA
- JHS – Journal of Hellenic Studies, London
- J. Hum. Evol. – Journal of Human Evolution, Elsevier Press (<http://www.journals.elsevier.com/journal-of-human-evolution/>)
- JNES – Journal of Near Eastern Studies. The Oriental Institute, University of Chicago, Chicago
- JRA – Journal of Roman Archaeology, Portsmouth, Rhode Island

- JRA SS – Journal of Roman Archaeology, Supplementary Series, Portsmouth, Rhode Island
- JRGZM – Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz, Mainz
- JRS – Journal of Roman Studies, London
- Klio – Klio. Beiträge zur Alten Geschichte, Berlin
- KölnJb – Kölner Jahrbuch. Römisch-Germanisches Museum Köln, Köln
- Közlemények – Közlemények az Erdélyi Nemzeti Múzeum Érem-és Régiségtárából, Kolozsvár
- Kuhn-Archiv – Universität Halle-Wittenberg. Landwirtschaftliches Institut, Martin-Luther-Universität Halle-Wittenberg, Landwirtschaftliches Institut, Halle
- Lethes – Lethes. Cadernos Culturais do Limia, Centro Cultural Popular do Limia, Ourense
- LSJ – H.G. Liddell, R. Scott, H.S. Jones (eds.), *A Greek-English Lexicon*, Oxford, Clarendon Press (9th edition), 1940.
- Lucentum – Lucentum. Universidad de Alicante, Alicante
- Lumea veche – Lumea Veche, Revistă de umanioare, București
- MAGW – Mitteilungen der Anthropologischen Gesellschaft in Wien, Wien
- MAInstUngAk – Mitteilungen des Archäologischen Instituts der Ungarischen Akademie der Wissenschaften, Budapest
- Marisia – Marisia. Muzeul Județean Mureș, Târgu Mureș
- MASP – Materiali po Arheologii Severnogo Pričernomorja, Odesa
- MatArch – Materiały Archeologiczne, Kraków
- MatArchNovHuty – Materiały *Archeologiczne Nowej Huty*, Nova Huta
- Materiały Starożytne – Materiały Starożytne i Wczesnosredniowieczne, Warszawa
- MCA – Materiale și cercetări arheologice. Academia Română, Institutul de Arheologie „Vasile Pârvan”, București
- MCV – Mélanges de la Casa Velázquez. Casa de Velázquez, Madrid
- MFME – A Móra Ferenc Múzeum évkönyve. Móra Ferenc Múzeum, Szeged
- ML – R. Meiggs, D.M. Lewis, *A Selection of Greek Historical Inscriptions to the End of the Fifth Century BC*, Oxford, OUP, 1969
- Mnemosyne – Mnemosyne, A Journal in Classical Studies, Brill, Leiden
- MSROA – Materiały i Sprawozdania Rzeszowskiego Ośrodka Archeologicznego, Rzeszów
- Mus.Afr. – Museum Africum. West African Classical Association, University of Ibadan – Department of Classics, Ibadan
- Nor.Arch.Rev – Norwegian Archaeological Review, Taylor & Francis
- NumZ – Numismatische Zeitschrift. Österreichische Numismatische Gesellschaft, Wien
- OMNI. Revue internationale de numismatique – OMNI. Revue internationale de numismatique, L’association OMNI (Objets et Monnaies Non Identifiés) – <http://www.identification-numismatique.com/> (<http://www.wikimoned.com/omni/>)
- Palaeontologia Electronica – Palaeontological Association, England
- Pallas – Pallas. Revue d’Études Antiques. Université de Toulouse le Mirail, Toulouse
- PamArch – Památky Archeologické, Praha
- PAPhS – Transactions and Proceedings of the American Philological Society. Johns Hopkins University Press, Baltimore
- PBF – Prähistorische Bronzefunde. Akademie der Wissenschaften und der Literatur, Mainz, Seminar für Vor- und Frühgeschichte der Goethe-Universität Frankfurt a. M., Abteilung für Ur- und Frühgeschichtliche Archäologie des Historischen Seminars der Westfälischen Wilhelms-Universität, Münster
- Peuce – Peuce. Studii și Note de Istorie Veche și Arheologie. Muzeul Delta Dunării / Institutul de Cercetări Eco-Muzeale „Simion Gavrilă”, Tulcea
- Peuce S.N. – Peuce, serie nouă. Studii și Cercetări de Istorie și Arheologie. Institutul de Cercetări Eco-Muzeale „Simion Gavrilă”, Tulcea
- Phoenix – Phoenix. Classical Association of Canada, Trinity College, Toronto, Ontario
- PIR² – *Prosopographia Imperii Romani, saec. I-III*, ed. II, Berlin-Leipzig
- PLRE – *Prosopography of the Later Roman Empire*, Cambridge University Press, 3 vol., 1971, 1980, 1992

- PME – H. Devijver, *Prosopographia militiarum equestrium quae fuerunt ab Augusto ad Gallienum*, 5 vol., Louvain, 1976–1993
- Pomorania Antiqua – Pomorania Antiqua, Gdańsk
- Pontica – Pontica. Muzeul de Istorie Națională și Arheologie, Constanța
- Prace i Materiały – Prace i Materiały Muzeum Archeologicznego i Etnograficznego w Łodzi, Łódź
- Proceedings of the Massachusetts Historical Society – Proceedings of the Massachusetts Historical Society. Massachusetts Historical Society, Boston
- PV – Přehled Výzkumů, Brno
- PZ – Praehistorische Zeitschrift. Freie Universität, Institut für Prähistorische Archäologie, Berlin
- RadVM – Rad Vojvodjanskih Muzeja, Novi Sad
- Raport ... – Raport, Narodowy Instytut Dziedzictwa. National Heritage Board, Warszawa
- RE – Realencyclopädie der classischen Altertumswissenschaften, Stuttgart, 1893 –
- REA – Revue des Études Anciennes. Maison de l'Archéologie, Université Bordeaux Montaigne, Pessac
- RechsArch – Recherches Archeologiques, Kraków
- RégFüz – Régészeti Füzetek. Magyar Nemzeti Múzeum, Történeti Múzeum, Budapest
- RESEE – Revue des Études Sud-Est Européennes. Academia Română, Institutul de Studii Sud-Est Europeene, București.
- RevBistr – Revista Bistriței. Complexul Muzeal Bistrița-Năsăud, Bistrița
- RevMédVét – Revue de Médecine Vétérinaire. Ecole Nationale Vétérinaire de Toulouse, Toulouse
- RFE/RL East European Perspectives – Radio Free Europe / Radio Liberty
- RH – Revue Historique. Presses universitaires de France, Paris
- RhM – Rheinisches Museum. Rheinisches Museum für Philologie, Universität zu Köln, Köln
- RI S.N. – Revista Istorică. Academia Română, Institutul de Istorie „Nicolae Iorga”, București
- RIC – *Roman Imperial Coinage*, London
- RM – Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung, Rom
- RMD – M.M. Roxan, P. Holder, *Roman Military Diplomas*, 5 vol., London, 1978–2006
- RocznMuzGórnyBytom – Rocznik Muzeum Górnośląskiego w Bytomiu, Bytom
- RRH – Revue roumaine d'histoire. Academia Română, București
- RRHA – Revue Roumaine d'Histoire de l'Art, Série Beaux-Arts. Academia Română, Institutul de Istoria Artei „G. Oprescu”, București
- RRSE – Revista Română de Studii Eurasiatice. Centrul de Studii Eurasiatice, Constanța
- SAA – Studia Antiqua et Archaeologica. Universitatea “Al. I. Cuza”, Iași
- Sargeția – Acta Musei Devensis. Muzeul Civilizației Dacice și Romane, Deva
- Sautuola – Sautuola. Instituto de Prehistoria y Arqueología “Sautuola”, Santander
- SCIM – Studii și Cercetări de Istorie Medie. Academia Română, Institutul de Istorie „Nicolae Iorga”, București
- SCIV(A) – Studii și cercetări de istorie vecie (și arheologie). Academia Română, Institutul de Arheologie „Vasile Pârvan”, București
- SCN – Studii și Cercetări de Numismatică. Academia Română, Institutul de Arheologie „Vasile Pârvan”, București
- Scripta Mediterranea – Scripta Mediterranea. Canadian Institute for Mediterranean Studies, University of Toronto, Toronto
- SHA – *Scriptores Historiae Augustae*
- SIB – Studii de Istorie a Banatului. Universitatea de Vest din Timișoara, Timișoara
- SlovArch – Slovenská Archeológia, Nitra
- SMIM – Studii și Materiale de Istorie Medie. Academia Română, Institutul de Istorie „Nicolae Iorga”, București
- Somogyi Múzeumok Közleményei – Somogyi Múzeumok Közleményei, Kaposvár
- SpisyArch – Spisy Archeologického Ústavu v Brně, Brno
- SprawArch – Sprawozdania Archeologiczne, Kraków
- ŚSA – Śląskie Sprawozdania Archeologiczne, Wrocław
- StComSatuMare – Studii și Comunicări. Muzeul Județean Satu Mare, Satu Mare
- ŠtudZvesti AÚ SAV – Študijné Zvesti. Archeologického Ústavu Slovenskej Akadémie Vied, Nitra

- Syria – Syria. Revue d'Art Oriental et d'Archéologi., Institut français du Proche-Orient, Paris
- Talanta – Talanta. Proceedings of the Dutch Archaeological and Historical Society, Amsterdam
- Thraco-Dacica – Thraco-Dacica. Academia Română, Institutul de Arheologie „Vasile Pârvan”, Bucureşti
- Tibiscum – Tibiscum. Studii şi comunicări de etnografie-istorie. Muzeul Caransebeş, Caransebeş
- TIR – *Tabula Imperii Romani*
- Transilvania – Transilvania. Centrul Cultural Interetnic Transilvania, Sibiu
- Transylvanian Review – Transylvanian Review. Centrul de Studii Transilvane, Cluj-Napoca
- Ub. I – *Urkundenbuch zur Geschichte der Deutschen in Siebenbürgen I* (eds.: F. Zimmermann, C. Werner), Hermannstadt, 1892.
- Ub. II – *Urkundenbuch zur Geschichte der Deutschen in Siebenbürgen II* (eds.: F. Zimmermann, C. Werner, G. Müller), Hermannstadt, 1897.
- Váci Könyvek – Váci Könyvek. Tragor Ignác Múzeum, Vác
- VP – Východoslovenský Právek, Košice
- Wiadoomości Arch. – Wiadoomości Archeologiczne, Bulletin Archéologique Polonais, Warszawa
- WJA – Würzburger Jahrbücher für die Altertumswissenschaft, Würzburg
- ZA – Zeitschrift für Archäologie, Berlin
- Zborník SNM ... , Archeológia ... – Zborník Slovenského Národného Múzea. Archeológia, Bratislava
- Ziridava – Ziridava. Studia Archaeologica. Muzeul Judeţean Arad, Arad
- ZPE – Zeitschrift für Papyrologie und Epigraphik, Bonn
- ZRG – Zeitschrift der Savigny-Stiftung für Rechtsgeschichte. Romanistische Abteilung, Köln