
SEQUENCES OF THE TRANSYLVANIAN *LIMESFORSCHUNG*. ISTVÁN FERENCZI AND THE *LIMITES* RESEARCH IN DACIA POROLISSENSIS

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In memory of István Ferenczi (1921-2000)

REZUMAT: ISTVÁN FERENCZI ȘI CERCETAREA FRONTIEREI ROMANE DIN TRANSILVANIA

Articolul de față se concentrează pe activitatea arheologului maghiar István Ferenczi (1921-2000) în sfera cercetării frontierelor romane. Cu ocazia celei de-a o sută aniversări a nașterii sale, considerăm mai mult decât necesară realizarea unei treceri în revistă a muncii sale enorme de pionerat în cercetarea fortificațiilor minore (turnuri de supraveghere, fortificații mijlocii de tip *burgus*) și liniare, frontaliere, împreună cu o abordare a perspectivelor sale teoretice despre *cum funcționa frontiera Daciei nordice*. Structura studiului va urma câteva aspecte cheie prin care dorim să prezentăm în manieră sintetică activitatea contextualizată a lui Ferenczi în domeniul menționat mai sus. După o scurtă introducere care va conține câteva note biografice, vom discuta pe rând probleme care țin de cercetarea sa de teren în diferite zone ale Daciei Porolissensis, de cele (câteva) cercetări arheologice precum și despre interpretările generale privind funcționalitatea frontierei romane.

ABSTRACT:

The present article focuses on the activity of the Hungarian archaeologist István Ferenczi (1921-2000) in the field of Roman frontier studies. On the occasion of his 100th birthday, we consider it more than necessary to review his enormous pioneering research on the minor (watchtowers, fortlets) and linear frontier fortifications, together with an approach regarding his theoretical outlooks on *how the frontier of the northern Dacia worked*. The structure of the study will follow several key aspects through which we want to present Ferenczi's research and contextualized activity synthetically, as mentioned. After a brief introduction that will contain a few biographic notes, we will discuss, by turn, issues regarding his field surveys in various frontier areas of Dacia Porolissensis, his (few) archaeological excavations, his theoretical background, and his general interpretations of the functionality of the Roman frontier.

CUVINTE CHEIE: Ferenczi István, frontiera romană, Dacia Porolissensis, cercetări de teren, teorie arheologică.

KEYWORDS: Ferenczi István, Roman frontier, Dacia Porolissensis, field survey, archaeological theory.

I. Who was István Ferenczi? Short biographical notes

Born on the April 15 1921 in Cluj / *Kolozsvár*, István Ferenczi was the first son of Ferenczi Sándor, a Hungarian – born scholar formed within the archaeological school founded by Béla Pósta. Participating in his father's archaeological excavation from the early age of three¹, Ferenczi revolved around this research activity type. His upper secondary education was accomplished at the Reformed College of Cluj / *Kolozsvári Református Kollégium*, where he studied, among other subjects, history and linguistics with S. Biró and G. Finta. Later, in 1940, he began his studies in history and geography at the Ferenc Józseph University of Cluj under the supervision of several renowned Hungarian archaeologists such as G. László or I. Méri.²

Also, during this period, namely in 1941, he published his first study regarding the north-western area of the frontier of Dacia Porolissensis, following the earlier research of Károly Torma and Árpád Buday³ (the study was published on the occasion of the anniversary of 80 years since the beginnings of Torma's research on *limes Dacicus*⁴),

¹ Vincze 2001, 347. For other evocations see especially Dénes 2000, 18-21; Ambrus 2000, 2; Vincze 2000, 326-329; Vincze 2000a, 27-29; Bârsu, C. 2000. *Clujeni ai secolului 20: dicționar esențial*. Cluj-Napoca: Casa Cărții de Știință, 116.

² Vincze 2001, 347.

³ Cociș 2016, 41-44.

⁴ Ferenczi 1941, 189.

indicating from now on one of his central direction of archaeological research: the frontiers of Roman Dacia. Unfortunately, his early studies and research were brutally interrupted by the Second World War, when he was enrolled and sent on Germany and Denmark's frontlines in 1943, subsequently captured by the English Army and imprisoned for 17 months.⁵ He finished the studies after the end of the war, being appointed as a teacher in 1947. Later, in 1948, Ferenczi was appointed as an assistant professor at the Department of Archaeology led by G. László and, in 1952, a lecturer. At the same time, he was hired as a researcher at the History Institute of the People's Republic of Romania (1949 – 1956)⁶.

With the founding of the National History Museum of Transylvania in 1962, Ferenczi was transferred to the newly created structure, being head of the Prehistory Department, Roman and Dacian History and Prefeudal period⁷. Even if he officially retired in 1982, his activity in the field of history and archaeology remained constant at a high level. He continued the field surveys in Transylvania as well as the detailed data dissemination. After 1989, he continued his teaching career within the *Babeş-Bolyai* University of Cluj-Napoca, *Hyperion* University of Bucharest (Sfântu Gheorghe branch), and *Janus Pannonius* University of Pécs⁸. After a long but difficult career, the same university of Pécs awarded Ferenczi the distinction of *doctor honoris causa* in 1996⁹.

The fields of study that Ferenczi addressed during his career were numerous, producing over 300 studies concerning the Prehistory, pre-Roman Dacia, the Province, the migration period and the early Middle Ages, and other papers regarding the museums and the museography of Transylvania.¹⁰ Unfortunately, his outstanding work and results have not been fully capitalized on by the generations that followed, with few exceptions. Therefore, in the following pages, we intend to refresh and closely review his activity and results in the field of the Roman frontier study from Transylvania.



Fig. 1. István Ferenczi (1921-2000). After Vincze 2001, 347.

II. The context. *Limes Dacicus*, Torma's legacy and the Roman frontier studies in the second half of the 19th – early 20th century.

To integrate Ferenczi's work on the Roman frontier from Transylvania, we must first analyze briefly the research carried out by the early archaeologists of the Belle Époque. The evolution of the archaeological research in Transylvania after 1918 is organically related to the previous period¹¹ when the Hungarian or German-born scholars took the first steps to identify and research archaeological sites belonging to the Roman *limites*¹². The first written accounts on the Roman frontier sites are much older than the year mentioned above¹³. Except for some unexplored areas, Ferenczi's field surveys were based on the previous work accomplished by Károly Torma, Árpád Buday or Téglás Gábor.

As he rightly pointed out, the Roman frontiers research in Transylvania began by chance, namely due to the misreading of a famous inscription¹⁴. The inscription in question¹⁵ was discovered within the auxiliary fort at Samvm / Căşieu (Cluj County), subsequently moved at the Haller Castle from Coplean (Cluj County), discovered

⁵ Vincze 2001, 347.

⁶ Vincze 2001, 348.

⁷ Vincze 2001, 348.

⁸ Vincze 2001, 348.

⁹ See in this direction the *laudationes* from 1996 in László 1996, 7-14 and Tóth 1996, 15-16;

¹⁰ The (almost) complete bibliography of I. Ferenczi (on-line version) in: https://www.sulinet.hu/oroksegtar/data/kulhoni_magyarsag/2010/ro/csiki_2009_regeszeti/pages/001_Ferenczi_Istvan.htm. The compilation contains all the four bibliographic lists available up to now.

¹¹ Cociş 2018, 117.

¹² See especially Gudea 1997, 7–18, Marcu, Cupcea 2013, 569–573, Cociş 2016, 41–46.

¹³ See for example the descriptive repertoire of K. G. v. Windisch from 1790 (Windisch 1790, 439–440) or the older site descriptions (in Latin) of the catholic prelate Iosif Vaida, dated 12 November 1859 (Ardevan 1977, 135-137).

¹⁴ Ferenczi 1971, 613; Cociş 2016, 41.

¹⁵ CIL III, 827.

and interpreted by Torma¹⁶. The inscription was raised by an aedilis coloniae Napocae and beneficiarius consularis named Valerius Valentinus for the goddess Nemesis¹⁷; the inscription is also the first attestation of vicus Samvm, the settlement on the banks of the river Someş¹⁸. Torma's misread the part ...subsi[g](navit) Samum cum reg(ione) (tr)ans vall(um)...¹⁹ (later corrected and reread by A. v. Domaszewski²⁰).

However, being confident in the existence of a certain *regio transvallum*, Torma started in 1862 his first field surveys on the Meseş Mountains in order to discover the traces of the *vallum* – the traces of the Roman frontier – the later *limes Dacicus*²¹ as he named the *limes* stretch from Bologa auxiliary fort to Porolissum, an year later, in 1863²². His repeated expeditions over the years led to the first identifications of the physical elements of the frontier, most of them located within the frame of the north-western areas and only a few meters north of Someş River. As N. Gudea once underlined, the first archaeological discoveries of Torma in the frontier area at Bologa – Poieni were a complete surprise²³. After a survey that could be nevertheless called a *blind survey*, he managed to identify in the north-western confines no less than 25 watchtowers, three fortlets and two linear fortifications²⁴ and other (at least) two watchtowers near the auxiliary fort and vicus at Ilişua – *Arcobara*²⁵. The field surveys were accompanied by accurate descriptions of the location and state of preservation, ground plans and altimetric profiles²⁶.

Besides this tremendous work, Torma conceived two interpretative directions, strongly contradicted by his colleagues. The first of them established that the ruins found within the Meseş Mountains were of Roman origin, and second, he postulated the existence of a continuous palisade that sealed the frontier of Dacia (based on the fact that he identified an earth *vallum* near Poieni village – Cluj County and another one near Brebi village – Sălaj County). The possibility of an anthropic, continuous linear fortification built after the well known British or Germanic model²⁷ was heavily criticized immediately by O. Tivadar in 1875²⁸. A year later, F. F. Römer also contested the theory of *continuous palisade*²⁹. After his *A Limes Dacicus felső része*, the foundation of the studies regarding the Roman frontier from Dacia Porolissensis, the Roman nature of the finds is no longer questioned and criticized, the arguments being even more reliable. This time, Torma's statements are much more cautious and barely visible in the economy of the study regarding the continuous palisade³⁰. As expected, the criticism came this time from German scholars, namely from A. v. Domaszewski and Th. Mommsen, both of them neglecting the finds' antique characters, the reality of a *regio transvallum*, and, in the end, the whole concept of *limes Dacicus*³¹. However, Domaszewski believed in a continuous barrier of *Talspereen*-type on the Meseş Mountains, an idea that will be mechanically used (without field surveys or any other direct proofs) by some prestigious scholars from the 1st half of the 20th century³².

As respects the northern sector, mainly the stretch from Căşieu/Samvm to Ilişua/Arcobara, we must say that it received little attention from the Transylvanian *Limesforschung* scholars, the systematic research being carried for the first time by Ferenczi. Nevertheless, Torma found two watchtowers near the auxiliary fort at *Arcobara* (of which one was almost fully excavated³³), not enunciating any hypothesis regarding the functionality of the chain line located north of River Someş. To resume, we underscore the fact that Torma's work as a whole became in time a *must-read* for every scholar who wants to start research on the *limites* of Dacia Porolissensis.

¹⁶ A detailed description in Buday 1912, 121.

¹⁷ CIL III, 827.

¹⁸ Isac 2003, 48.

¹⁹ Torma 1861, 37-38; Torma 1880, 4.

²⁰ See the reading of Domaszewski in CIL III, 7633. However, the first scholar who conceived the theory regarding the existence of a *regio Ans(amensium)* was V. Pârvan (Pârvan 1926, 275); see further Russu 1956, 120-123; Isac 1994, 205-215; Opreanu 1994, 69-78; Isac 2003, 48-58; Vătavu 2011, 225-234 (with the major bibliography), Cupcea 2014, *passim*.

²¹ Buday 1912, 121. As it was already explained (Cociş 2016, 42), the term / concept *limes Dacicus* is a modern one, created by Torma in order to name the north-western stretch of the frontier in Transylvania, between the auxiliary fort at Bologa and Porolissum, being more a *linguistic artefact* with an antiquisation role, a process very well explained by G. Florea for the case of *murus Dacicus* (Florea 2016, 223).

²² The term was used for the first time in 1863 (Torma 1863, 37).

²³ Gudea 1997, 12.

²⁴ See the full description and sketches in Gudea 1997, 12.

²⁵ See further Boda 2013, 75-106 for Torma's research at Ilişua – *Arcobara*.

²⁶ Torma 1880.

²⁷ Panaitescu 1929, 75.

²⁸ Ortway 1875, 257-270.

²⁹ Römer 1875, 260-263; Römer 1876, 45-46.

³⁰ See especially the commentaries on CIL III, 7633 and Panaitescu 1929, 74.

³¹ Domaszewski 1893, 240-242.

³² Cociş 2016, 41-75.

³³ Torma 1864, 13, Pl. II, Z and L.

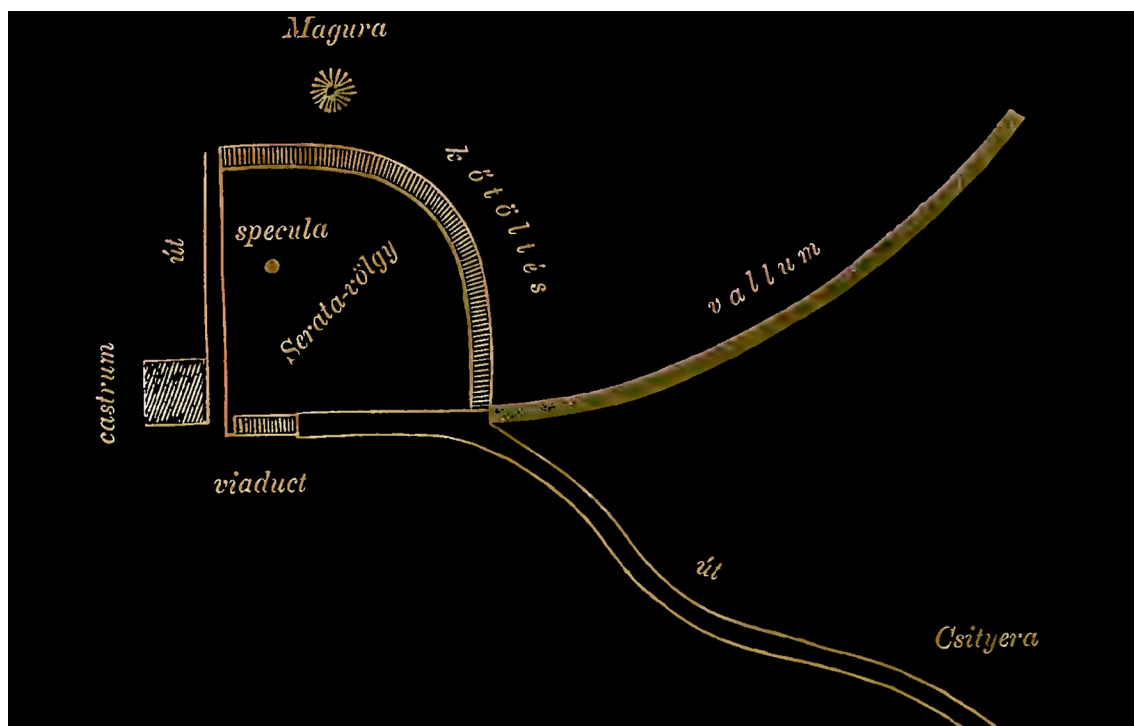


Fig. 2. Porolissum and its defensive elements as seen by K. Torma; reverse colours (after Torma 1880, 82, Fig. 6).

After Torma's departure at Porto d'Anzio in 1887 and his death, which occurred in 1897, the general interest for this subject dropped significantly until a new generation of scholars reopened the dossier of *limes Dacicus*. Several years later, in the first decades of the 20th century, the research history recorded three names related to the topic: Gábor Finály, Gábor Téglás, and Árpád Buday. G. Finály followed Torma's account on *Poguior Hill*³⁴, a central element of the frontier crossing point of *Poarta Meseșană* pass³⁵. Even if he excavated the stone circular ruins of the watchtower and the Dacian turf and timber enclosures, he found Roman building material, potsherds, jewellery pieces, and metal artefacts, completely denying the chronology of these finds, neglecting Torma's (correct) accounts automatically³⁶.

Starting from 1906 onward, G. Téglás began his research on the north-western frontier of Dacia Porolissensis. In the same year, he made a documentary trip on the *ORL*³⁷. The research visit was finalized by publishing a study on the liner frontier systems of Germania and Raetia, including a series of personal comments on the *modus operandi* of this particular linear framework³⁸. In the following year, he publishes a brand new study where he automatically imported the spatial and functional patterns of the *ORL*, strongly supporting the existence of the same system in Dacia Porolissensis³⁹. Thus, he adopted a different physical reality mechanically, postulating a theory that suggests a continuous palisade within the Meseș Mountains area without any scientific basis. More than that, he denied the realities encountered in his field surveys, subsequently attracting fervent criticism from I. Ferenczi⁴⁰.

The correspondence carried by Téglás⁴¹ in order to obtain financial support from the local authorities and the Hungarian Academy of Sciences between 1906 – 1907 encountered several difficulties. In the end, the funding applications were rejected for no apparent, coherent reason.⁴² Despite this lack of funding, it is more than certain that Téglás carried out archaeological research founded by other (yet) unknown sources; unfortunately, we cannot say to which extent he researched the north-western frontier (and especially where). In 1912, Á. Buday noted that he received a research report written by Téglás⁴³ in which it is mentioned that he undertook field research in

³⁴ Torma 1880, 76-79.

³⁵ For a detailed discussion and for the latest archaeological research on *Poguior Hill* see Cociș, Bejinariu 2019, 83-102.

³⁶ Finály 1904, 9-15.

³⁷ Ferenczi 1971, 613.

³⁸ Téglás 1907, 565-580.

³⁹ See further Ferenczi 1971, 613-614; Cociș 2016, 43-44.

⁴⁰ Ferenczi 1971, 613-614.

⁴¹ Gudea 1997, 12.

⁴² See the letters translated and published by E. Wagner (Wagner 1980, 678-681).

⁴³ Buday 1912, 109.

the northern and north-eastern areas of the Roman Province (?)⁴⁴. Téglás was harshly criticized by his colleagues and by the next generation of scholars due to the outdated research methods⁴⁵. His theories were considered pure fantasy, lacking the scientific rigour of the German school, whose influence marked him in full⁴⁶.

Like his colleague before, Á. Buday undertook a research trip on the German frontier before the actual field research in Dacia Porolissensis, acquainting with the linear system and the general organization of this particular frontier type⁴⁷. He published a detailed study on the ORL at the end of the visit, but much more detailed than his predecessor, using sketches, artistic drawings, and even site photos⁴⁸. Returning to Transylvania, Buday began, particularly following Torma's descriptions, the field surveys on the north-western sector of *limes Dacicus*, from Bologa – Poieni (Cluj County) area up to *Porolisum*, his records being of high importance. He used the same method applied on the ORL, a large scale survey accompanied by detailed descriptions and site photos (for the first time on the frontier of Dacia Porolissensis)⁴⁹. He also made a series of altimetric profiles of the encountered ruins (especially watchtowers and fortlets but also several linear fortifications).⁵⁰ Besides a series of new finds and accurate descriptions, he made the first topographical map of the Meseş Mountains containing the main toponymy of the Roman frontier sites⁵¹.

Even though his field record methods are marked by visible technical progress, Buday adopted the *classical* theory that postulates a continuous linear fortification on the course of the Meseş Mountains, being criticized in turn, mainly by I. Ferenczi⁵². This automatic mechanism is similar to the one used by his predecessor, extrapolating the archaeological realities attested on the frontiers of Germania and Raetia in the north-western area of Dacia Porolissensis, falling in the same interpretative trap. We believe that this theory's climax is reached with the statements of Ernst Fabricius. He (utterly undocumented) emphasized the idea of a continuous turf and timber palisade that connected Porolisum with the Danube⁵³ a concept primarily inspired by Mommsen's *double frontier* theory⁵⁴. Later, Giovanni Forni adapted to some extent Fabricius's theory, postulating a continuous hermetically sealed border⁵⁵.



Fig. 3. The stone watchtower at Vârful Teghişului (Sălaj County) in 1912 (after Buday 1912, 114, Fig. 10).

Starting with 1909, Iulian Marţian began to show interest in the Transylvania antiquities in general and the Roman frontier of Dacia in particular⁵⁶. In his study from 1920⁵⁷ he described (with the necessary exaggerations) the frontier system at Porolisum, creating a series of general ground plans⁵⁸. I. Marţian generally describes several linear fortifications, watchtowers, and fortlets⁵⁹. After these records, he interpreted the minor and linear structures

⁴⁴ Téglás 1909, 262.

⁴⁵ Gáll 2014, 219-293.

⁴⁶ Buday 1936, 130.

⁴⁷ Ferenczi 1971, 613.

⁴⁸ Buday 1910, 1-117.

⁴⁹ Buday 1912, 101-107, 110, 114-115.

⁵⁰ Buday 1912, 99-119; 1914, 95-105.

⁵¹ Buday 1912, 119; see also Gudea 1989, 355.

⁵² See the discussion in Ferenczi 1971, 613-614.

⁵³ Fabricius 1926, 642.

⁵⁴ Mommsen 1908, 456-464; see also Isaac 1988, 130.

⁵⁵ Forni 1959, 1074.

⁵⁶ Gaiu 2012, 113-155.

⁵⁷ Marţian 1920.

⁵⁸ Marţian 1921, 8-9.

⁵⁹ Marţian 1920, 10-11, Fig. 4.

as continuing from Porolissum up to Maramureş County (Lăpuş area)⁶⁰. The subsequent explanations about the frontier system of Dacia Porolissensis being an absolute fiction.

At the end of the third decade of the 20th century, a shift of research interests is visible, from the north-western area of Dacia Porolissensis⁶¹ to the northern one, especially between the auxiliary forts at *Samum* and *Arcobara*. Except for the later research carried out by I. Ferenczi, the understanding process of these particular segments does not exceed the theoretical level. Emil Panaitescu made the first attempt. During the archaeological excavations carried out at *Samum* auxiliary fort, he postulated a Roman frontier existence on the course of the Someş river, at a distance of about 60 km⁶². The hypothesis was contested later by Aladár Radnóti, which erroneously placed the northern frontier on Breaza peak alignment⁶³ refuted in turn by the field research undertaken by I. Ferenczi⁶⁴. Dumitru Tudor adopted in 1968 Panaitescu's position. He also stated that the northern area of the frontier of Dacia Porolissensis does not have in its system minor fortifications as those from the Porolissum area⁶⁵; a baseless hypothesis, especially for the fact that already in 1959, G. Forni stated that on the northern frontier, on a stretch of 10 – 25 km there are about 36 frontier installations spatially distributed in close connection with the landscape settings⁶⁶.

In the 1930s, Constantin Daicoviciu began extensive field research on the course of the Meseş Mountains, from Bologa up to Porolissum - Brebi area (following K. Torma and Á. Buday earlier accounts) where he excavated inside the two turf and timber fortlets and a palisade segment⁶⁷. His theoretical hypotheses are entirely opposed to the physical organization of the north-western frontier, as were postulated by his predecessors. In his opinion, the structures saw by K. Torma at Poieni are modern; there is no stone wall and the *limes* described by K. Torma and Á. Buday at Poieni and Buciumi is non-existing⁶⁸. After his archaeological research, C. Daicoviciu states that the only linear frontier system is to be seen at Brebi, denying a complete linear frontier of a Germanic type in Dacia Porolissensis. The only physical organization consist of watchtowers, fortlets and forts, strategically located within the local relief⁶⁹.

The 1940s witnessed a shift of perception and applied methodology for the research of the north-western frontier area of Dacia Porolissensis, generally conducted by the Hungarian Scholar Aladár Radnóti. Following his (somewhat) systematical archaeological research carried out within the auxiliary fort at Porolissum – *Pomet*⁷⁰, Radnóti marked the pioneering of aerial photography applied on sites as a tool for mapping and identifying the archaeological features belonging to the Roman frontier from the Meseş Mountains and Porolissum area⁷¹. With the Hungarian Military Aviation (1943) help⁷², he surveyed the area in question, subsequently publishing a comprehensive study about the archaeological feature connected to a frontier interpretation. The covered area stretches from Bologa – *Poieni* in the south up to Porolissum in the north, recording several watchtowers, probably a series of fortlets, linear fortification and auxiliary forts, mapping precisely for the first time the trajectory of the north-western frontier from the air⁷³, confirming among other things, the structures described earlier by Torma and Buday⁷⁴.

As we argued in a previous study⁷⁵, I. Ferenczi's attempt to place Radnóti within the group of those who postulate the existence of a continuous linear frontier on the Meseş Mountains⁷⁶ is not entirely valid. Although Radnóti is a supporter of the classic *limes Dacicus* concept, the hypothesis of an organized defence at the confines of Dacia⁷⁷ has nothing to do with the theory mentioned above of a continuous *vallum* in the north-western area of Dacia Porolissensis.

With Radnóti's approaches, the Roman frontier research in Dacia Porolissensis from the first half of the 20th century naturally moves on to the following generation of scholars; a generation that almost entirely included

⁶⁰ Marţian 1920, 11.

⁶¹ Gudea 1988, 195-214.

⁶² Panaitescu 1929, 88; for further discussion see Daicoviciu 1945, 106; Ferenczi 1988, 127; Zăgreanu *et al.* 2017, 26.

⁶³ Radnóti 1945, 154.

⁶⁴ Ferenczi 1988, 129; see the recent archaeological research carried out on Breaza peak in Ardeleanu, Cardoş 2015, 163-188.

⁶⁵ Tudor 1968, 256.

⁶⁶ Forni 1959, 1283.

⁶⁷ Daicoviciu 1935, 254.

⁶⁸ Daicoviciu 1935, 254-255.

⁶⁹ Daicoviciu 1935, 255-256.

⁷⁰ Tóth 1998.

⁷¹ Mason, Croitoru 2016, 331-339.

⁷² Székely 2010, 380.

⁷³ Radnóti 1945, 137-168.

⁷⁴ Radnóti 1945, Pl. LXIII.

⁷⁵ Cociş 2016, 44-45.

⁷⁶ Ferenczi 1971, 616.

⁷⁷ Radnóti 1945, 159-160.

the work carried out by I. Ferenczi and N. Gudea, during the second half of the 20th century. We must underscore the archaeological activity-focused (as secondary objectives) of M. Moga, who excavated a rectangular stone watchtower and a two-phased linear fortification at Porolissum⁷⁸ and the systematic research of the fortlets and linear fortifications M. Macrea and his team around Porolissum military and civil core⁷⁹.

This is the background on which Ferenczi began his tremendous work: a fragmented field research on the frontier segment from the Meseș Mountains, physical frontier elements not correctly (and entirely) mapped at Porolissum, an almost complete survey gap on the northern and eastern frontier sector and the lack of a coherent definition and a viable, functional interpretation of the general framework of the frontier of Dacia Porolissensis and its minor and linear installations.

III. Filling the gaps, creating the maps. Ferenczi's field surveys on the frontier of Dacia Porolissensis

Naturally, Ferenczi started his field surveys and theoretical studies based on Torma's legacy in the north-west. His first results (at the very age of 20) are based on rigorous documentation. At this point, what differentiates him from his predecessors is not so much the applied field methodology (although several aspects are a complete novelty) but the fact that he was the first to offer a comprehensive theory and an interpretative framework of the north-western frontier of Dacia Porolissensis, the functionality of the frontier system being understood in entirely different parameters. The larger context in which he integrated his work permitted a more complex view of the *limites* framework.

In his first study mentioned above, he discussed theoretical approaches regarding the Roman frontier in Dacia Porolissensis, reviewing all the theories up to him⁸⁰. The early field surveys were conducted only in the Porolissum area, mapping the western part of the military and civil centre's inner fortification line, the turf and timber fortlets and palisade at Brebi⁸¹ and the so-called *double-wall* segment⁸² (the aqueducts of Porolissum⁸³). As topographic support, Ferenczi used a general map based on the Third Military Mapping Survey of Austria-Hungary (1869-1885), a singular case in the Roman frontier's bibliography about Dacia Porolissensis⁸⁴. His training as a geographer was intertwined with the *classical*, archaeological and historical studies, the topographic surveys of the sites, and the spatial mapping of the minor and linear frontier fortifications, being extremely accurate and valuable in understanding the building process of the frontier.

The research of the north-western sector undergoes a relatively long temporary hiatus, Ferenczi focusing now on an unknown (yet provocative) area: the western frontier of Dacia Porolissensis. The systematic surveys were carried out between 1947-1957, and in 1966, the covered area stretching between the auxiliary forts at Bologa (Cluj County) and Gilău (Cluj County). The first part of the results comprising the description of the landscape settings and the possible archaeological features were mentioned and contextualized in 1959⁸⁵. The rest of them only later, between

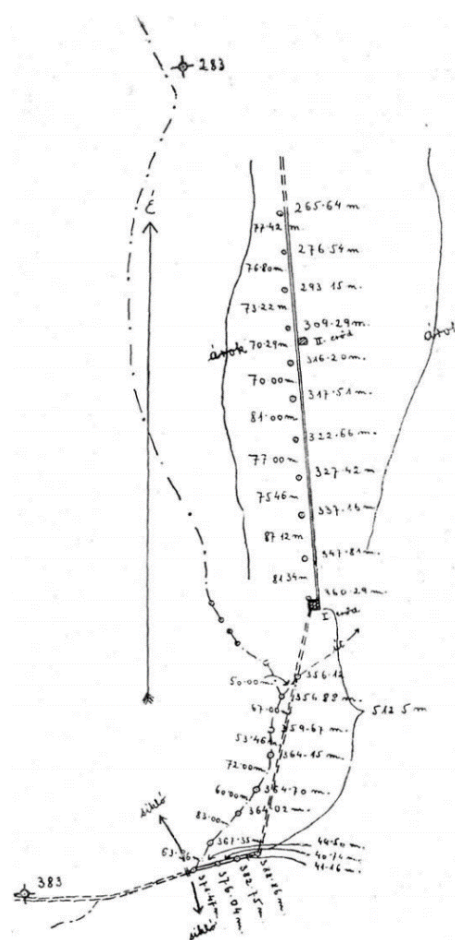


Fig. 4. The turf and timber palisade and fortlets at Brebi. The topographic survey of I. Ferenczi made in 1941 (after Ferenczi 1941, 196, Fig. 6).

⁷⁸ Moga 1950, 134.

⁷⁹ Macrea *et al.* 1961, 366-367; Macrea *et al.* 1962, 493-494.

⁸⁰ Ferenczi 1941, 189-190.

⁸¹ Ferenczi 1941, 194-199.

⁸² See in this direction the full discussion in Goos 1876, 218-226; Buday 1912, 99-119; Marțian 1920, 27, 29; Ferenczi 1941, 191-199; Radnóti 1945, 145; Daicoviciu 1953, 265; Macrea *et al.* 1962, 494-495; Gudea 1989, 107, 111; Matei 1995, 56; Matei 2005, 293-311; Cociș 2016, *passim*; Nedelea *et al.* 2019, 196.

⁸³ Matei 2005, 293-311.

⁸⁴ The extended map in Ferenczi 1941, Fig. 1.

⁸⁵ Ferenczi 1959, 337-354.



Fig. 5. The ruins of a stone watchtower near Agrij village (Sălaj County) photographed by I. Horváth in 1964 (after I. Ferenczi 1967, 149, Fig. 5).

Porolissum) was archaeologically researched in several critical points by M. Moga, M. Macrea and his team. After this brief episode, the north-western field research carried out by Ferenczi returns to the forefront. During the 1960s, he undertook a massive survey on the course of the Meseş Mountains, mapping and describing every minor and linear fortification between the auxiliary fort at Bologa and Tihău, focusing this time on the watchtowers, mapping about 50 structures, four fortlets and several linear fortifications (besides the two structures from Brebi, he accurately mapped for the first time the fortlet at *Dealul Secuiului*⁸⁹ and *Poic – La Arie*⁹⁰, based on Buday's survey⁹¹). The surveys are combined with field photography applied on a large scale, made by the renown photographer I. Horváth. The results were published in 1967 in a comprehensive study⁹²; Ferenczi's last field research-based contribution on the north-western frontier sector.

Interspersed with the research of the north-western and northern sectors, Ferenczi undertakes a series of surface and archaeological research in the eastern part of Transylvania, on the eastern frontier sectors, first at *Băile Homorod* area⁹³ and later (being also his prior studies on the subject), within the eastern frontier stretches between the auxiliary forts at Brâncoveneşti – Călugăreni, Călugăreni (Mureş County) – Inlăceni (Harghita County) and between Homorod Valey – Tuşnad (Harghita County)⁹⁴.

After 1968, Ferenczi started the long journey searching for the northern and north-eastern frontier of Dacia Porolissensis, a blind survey on the north-eastern extremities of Sălaj County and the north and north-eastern areas of Bistriţa-Năsăud County. During 1968, 1969 and 1971, he started the identification and mapping process of the minor frontier fortification between the auxiliary fort at Tihău (Sălaj County) and Ileanda (Sălaj County)⁹⁵, on the course of the Someş river, as well as north of this line where a series of archaeological features were considered advanced outposts of an outer frontier⁹⁶, a theory created on inconclusive arguments⁹⁷.

Based on several earlier accounts of Torma⁹⁸ and Kádár⁹⁹, Ferenczi managed to accomplish an almost *blind survey* process, identifying the minor frontier fortifications, completing considerable gaps in the stretches between Ileanda and the auxiliary fort at *Samum* and then between the mentioned fort and Salva (Bistriţa-Năsăud County),

1972-1974⁸⁶. The situation of the western frontier, as Ferenczi described, is still at the same stage, the gap between the auxiliary forts at Bologa and Gilău still being a desideratum. The situation changes west of the legionary fortress at Potaissa; a limitroph area was researched during the last decades, the discoveries and the archaeological excavations outlining an active rural hinterland with settlements specialized in stone and gold extraction⁸⁷. A similar situation at a smaller scale was outlined on the course of the Someş River, on the trajectory of the Roman road between the auxiliary forts at *Samum* and *Arcobara*⁸⁸.

However, when Ferenczi was involved in the western frontier area survey, the north-western sector (especially

⁸⁶ Ferenczi 1972, 387-412; Ferenczi 1973, 545-568; Ferenczi 1974, 23-40.

⁸⁷ A series of recent studies on the topic in Cociş *et al.* 2018, 93-118; Chiorean *et al.* 2019, 125-136.

⁸⁸ Cociş 2017, 153-163.

⁸⁹ Ferenczi 1967, 148, Fig. 4

⁹⁰ Ferenczi 1967, 150-151.

⁹¹ Buday 1912, 109.

⁹² Ferenczi 1967, 143-162.

⁹³ Ferenczi 1968, no. 10.97.

⁹⁴ Ferenczi and Petică 1994, 139-166; Ferenczi and Petică 1995, 121-143; Ferenczi and Dénes 1995, 393-400.

⁹⁵ Ferenczi 1988, 251-289.

⁹⁶ Ferenczi 1988, 257-258.

⁹⁷ Marcu *et al.* 2017, 24.

⁹⁸ Ferenczi 1988, 258-259.

⁹⁹ See especially several key notes in Kádár 1904, 90, 474.

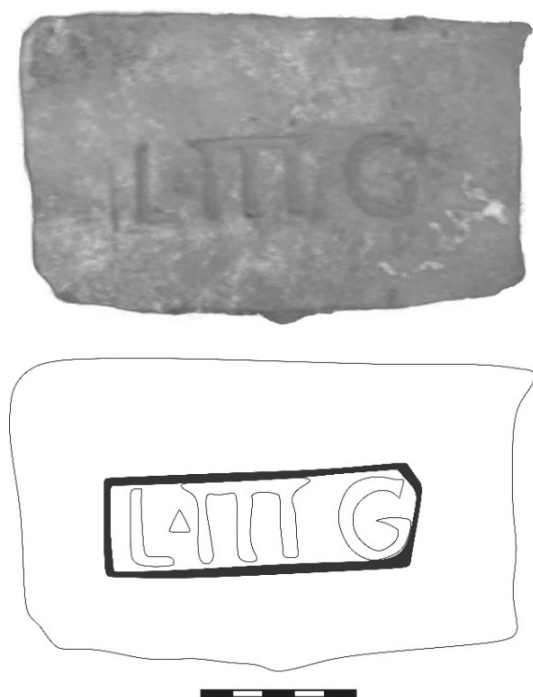


Fig. 6. The stamped brick of *legio III Gallica* discovered by Ferenczi at the stone watchtower from *Cetate 1* (after Cociş 2018a, 404, Fig. 5).

*Cetatea lui Negru-Vodă*¹⁰⁷, recently reinterpreted and contextualized¹⁰⁸: [---]t? *Saur(-ius?; -io?; -nus?; -us?)* [---] / [---] mile[s]¹⁰⁹.

Over about 50 years, Ferenczi managed to identify and map around 130 watchtowers, nine fortlets and seven distinct segments of linear fortifications (turf and timber palisade and stone walls). Regarding this part, he covered by foot a vast area of the Roman frontier in Dacia Porolissensis, covering five counties and hundreds and hundreds of kilometres. The gaps covered and populated with mapped archaeological features remains up to present a valuable cartographic source for every repertoire containing the elements of the Roman frontier in northern Dacia.



Fig. 7. The inscription from the stone fortlet at *Cetatea lui Negru-Vodă* (photo after Ferenczi 1973, 97, Fig. 10; drawing after H. Cociş 2016a, 67, Fig. 7).

intensifying the research in front of the auxiliary fort at *Arcobara*. The surveys and the mapping process between the 1970s and the 1980s were published in a series of studies containing geographical interpretation, accurate maps and photos of the archaeological features¹⁰⁰.

Even if the mapping process was a slow yet accurate one, the archaeological research undertaken by Ferenczi was at a significantly reduced scale, compared, for example, with the systematic research conducted by N. Gudea from 1966 to 1988, who excavated almost entirely around 66 minor fortifications and three linear ones.¹⁰¹ However, some of the features received more attention from Ferenczi. We briefly mentioned his extensive excavation from the watchtower called *Cetate 1* (Bârsău Mare, Sălaj County).¹⁰² He identified a damaged stone structure, potsherds and a stamped brick of *legio III Gallica*.¹⁰³ Their headquarters were identified at Porolissum (approx. 40 km south-west).¹⁰⁴

Fig. 6. The stamped brick of *legio III Gallica* discovered by Ferenczi at the stone watchtower from *Cetate 1* (after Cociş 2018a, 404, Fig. 5).

Another example is the square stone watchtower at *Hotroapă* (Căpâlna, Sălaj County)¹⁰⁵, where a two-phased structure was investigated utilizing a median archaeological trench. In the second stone phase, a *denarius* minted during Lucius Septimius Geta was found, now lost¹⁰⁶. The most iconic discovery during his surface surveys is, without doubt, the fragmentary inscription found near the stone fortlet at

¹⁰⁰ Ferenczi 1971, 73-84; Ferenczi 1972, 37-46; Ferenczi 1973, 79-104; Ferenczi 1974, 181-189; Ferenczi 1975, 285-289; Ferenczi 1976, 107-133.

¹⁰¹ See especially Gudea 1980, 661-663; Gudea 1985, 143-218; Gudea 1997.

¹⁰² Kádár 1900, 512; Ferenczi 1991, 137; Marcu *et al.* 2017, 21, Fig. 1; Cociş 2018a, 403-404.

¹⁰³ Cociş 2018a, 403-404.

¹⁰⁴ A recent discussion with the older bibliography in Piso and Deac 2016, 11.

¹⁰⁵ Ferenczi 1991, 139-140; Marcu *et al.* 2017, 21, Fig. 1.

¹⁰⁶ Ferenczi 1991, 140.

¹⁰⁷ Kádár 1901, 222; Marţian 1920, 28; Marţian 1921, 23-24; Ferenczi 1973, 95; Cociş 2016a, 53-67; Zăgreanu *et al.* 2017, 30; Cociş 2018b, 41-42.

¹⁰⁸ Cociş 2016a, 53-67.

¹⁰⁹ Cociş 2016a, 67, Fig. 7.

IV. *Quelques précisions concernant la notion de limes. Ferenczi's interpretations on the functionality of the Roman frontier.*

In order to draw Ferenczi's theoretical background concerning the interpretative fashions regarding the physical organization of the Roman frontier in northern Dacia, we must outline its critical points in relation to the main European theories he emphasized and used at that time¹¹⁰.

Ferenczi's theoretical framework for understanding and interpreting the Roman frontier in general and the northern Dacia stretch in particular could be observed almost in every study regarding different stretches, but, most of all, in two particular papers¹¹¹ (and one presentation¹¹²). In his synthesis from 1971, Ferenczi shook and reinterpreted the theoretical functionality of the classic concept of *limes Dacicus*, using a broad bibliographic spectrum combined with a variety of epigraphic and literary sources mainly from the western and eastern provinces¹¹³; there is no doubt that this is the first exhaustive Roman frontier analysis from the Transylvanian frontier studies.

Based on the analysis of the sources mentioned above, Ferenczi considered that the so-called *limes* was initially a military road, then a sort of fortification consisting of artificial barriers (where local politics and factors dictate the need) and finally, although he does not literally apply the theory of *regiones*, considers that starting with the late Roman period, the administration and the security of the frontier stretches is ensured by *duces* and *praepositi*¹¹⁴. Ferenczi's conclusions on the functionality and evolution of the Roman frontier as a whole anticipates to a large extent the subsequent study conducted by Benjamin Isaac and published in 1988¹¹⁵. Here it is demonstrated (and now more and more questioned¹¹⁶) the hypothesis that the *limes* underwent crucial metamorphoses in its conceptual and physical framework and operating system¹¹⁷ during the 1st – 4th c. AD, from a primary military road subsequently equipped with linear fortifications to an anthropic barrier such as Hadrian's Wall or the ORL, to the final use of the administrative security *regiones*¹¹⁸.

The approaches of Ferenczi to a theoretical model of the Roman frontier is primarily inclined towards what Edward Luttwak defined later as *preclusive defence - forward defence*¹¹⁹ concept. He considered that the Empire used, during the Principate (30-284 AD) and developed a general military strategy meant to neutralize the spotted enemy before crossing the frontier, the central conflict area being thus the Barbarian *vorlimes* in the vicinity of the state physical *limites*. From the 3rd century AD onward, Luttwak believes that the Empire's strategy undertook significant policy changes, appearing the so-called concept of *defence – in – depth* which involves military movements to neutralize the enemy on Roman territory, turning the frontier into an area of potential conflict¹²⁰. This particular theory of Luttwak reflects on the late Roman frontiers' economic dynamism and was harshly criticized by several leading theorists of the Roman frontier studies.

Another crucial interpreting direction observed at Ferenczi to a certain extent is what J. C. Mann defined as mobility support. According to Mann, the frontier's architecture and the general operating principles generate and support the military factor's mobility along the frontier lines to ensure security and stop potential conflicts. This particular aspect is, in his opinion, the basis of the entire Roman frontier system¹²¹.

However, what differentiates Ferenczi is that extensive and systematic field research doubles his theoretical spectrum based on which the theories regarding the frontier's *modus operandi* are subsequently stated. To summarize the conclusions of his research on the concept of *limes* as a comprehensive approach, we outline that in his view, the frontier is organized in the form of a strip composed of a military road that connects the frontier auxiliary forts, doubled by watchtowers on the high grounds and fortlets in the valleys and crossing points – their role is to survey and control the traffic routes and the access ways into the Empire¹²².

¹¹⁰ Ferenczi 1971, 600-601, note 1; see Mommsen 1885, 43-51; Mommsen 1894, 134-143; Mommsen 1908, 444-452; Cagnat 1892 and especially Piganiol 1963, 119-122.

¹¹¹ Ferenczi 1968, 65-98; Ferenczi 1971, 588-625.

¹¹² Le système et le caractère du soi-distant „Limes Dacicus”. The resumes of papers read at 7th International Congress for Roman Frontier Studies, Tel Aviv University, Israel, 1967.

¹¹³ Ferenczi 1971, 600-612.

¹¹⁴ Ferenczi 1971, 603-607.

¹¹⁵ Isaac 1988, 125-145.

¹¹⁶ Symonds 2018.

¹¹⁷ Isaac 1988, 146-147.

¹¹⁸ Isaac 1988, 132-138.

¹¹⁹ Luttwak 1976, 51-126

¹²⁰ Luttwak 1976, 127-190

¹²¹ Mann 1974, 508-533.

¹²² Ferenczi 1971, 608-612.

According to the more recent paradigms, Ferenczi's conceptions may seem outdated and unjustified. However, even some general theories shifted the paradigms in the more recent period. Several of Ferenczi's observations fit perfectly into the newer trends regarding the particular operating system of the frontier of Dacia Porolissensis, even 50 years after their publication.

V. How the frontier of Dacia Porolissensis worked? The theoretical model of Ferenczi.

The general framework and functioning model emphasized by Ferenczi was, naturally, extrapolated within the confines of the studied area, creating thus a new theoretical model based on field surveys and archaeological evidence, also cancelling the theories launched by Buday and Finály. Their mechanical methods of importing the *ORL* physical realities in Dacia Porolissensis but especially their denial of the Roman character of the discoveries made by Torma (and by them), were severely criticized.

The fact that the two scholars imported a theory based on the operating principles of a linear frontier par excellence in the north-western area of the Province of Dacia Porolissensis, denying the archaeological evidence effectively, made Ferenczi accuse them of *gross mistakes, even the distortion of the archaeological reality*¹²³. He challenged Domaszewski's theory according to the northern Dacian *limes* is of a *Talsperren* – type (a theory that automatically disregards the field discoveries as being of a completely different nature)¹²⁴. However, he is tributary to Daicoviciu's observations regarding the non-existence of a continuous linear fortification on the Meseş Mountains¹²⁵.

Through his extensive field surveys, Ferenczi understood the frontier of Dacia Porolissensis as a defensive system built mainly following the local landscape settings (giving too much credit to what we now call *geographic determinism* or *environmental determinism*¹²⁶). The frontiers of the Roman Empire are not entirely built on the local geographical coordinates. However, the landscape settings¹²⁷ are combined with the so-called localism¹²⁸, a quantum of internal and external factors (the landscape, the raw material, the strategic crossing points, the human dynamics, the mobility of the troops, etc.) that generate particular frontier types in each Province, according to the local situation as a whole. The so-called *limites* are not an automatic byproduct of the Roman conquest but rather a response to the political status-quo generated by particular regional human dynamics¹²⁹.

In order to draw a red line through Ferenczi's theories regarding the *modus operandi* of the north-western frontier of Dacia Porolissensis, we applied a synoptic rendering in a tabular model in order to illustrate the fundamental ideas of his core theory.

Challenging Domaszewski's theory is a natural consequence of the extensive field surveys, a complexity being observed in the distribution patterns. The more populated the map, the better the complexity and the localism of the frontier system in Dacia Porolissensis is observed, mainly because we deal primarily with a so-called *mountain frontier* type. This system explores the local topography to boost the tactical elements combined in the most vulnerable areas with linear barriers templates¹³⁰.

Based on this, it is more than logic as the Porolissum area to have a complex surveillance system. What Ferenczi did not observe at that time is that the so-called multiple defence lines of Porolissum¹³¹ are actually two different surveillance and security systems, one belonging to the frontier and one the military and civilian core¹³², aspect to which we add the multiple phases and horizontal stratigraphy of the system, evolving through decades and moving its original location¹³³. The watchtowers location at a short distance, as Ferenczi correctly noted, is necessary to create a viable communication system functioning in an optimal framework, hence the density in a particular distribution line¹³⁴.

The high-security system of Porolissum fulfil several leading roles; one is to survey and control the main access route in the Province through the narrow pass of the *Meseş Gate*. It is not a coincidence that the same valey is

¹²³ Ferenczi 1971, 613.

¹²⁴ Ferenczi 1971, 614-615 *contra* Domaszewski 1893, 240-242.

¹²⁵ Ferenczi 1971, 615-616.

¹²⁶ See in this direction Lewthwaite 2001, 4607-4611; Keighren 2015, 720-725; Meyer 2020, 175-181.

¹²⁷ Breeze 2013, 1-19.

¹²⁸ Symonds 2018, 172-173.

¹²⁹ Symonds 2018, 15.

¹³⁰ For a frontier typology based on the major landscape features and spatial distribution of the frontier sites see Breeze 2011, 53-164 and Breeze 2013, 1-19.

¹³¹ See in this direction Gudea 1989, 105-115.

¹³² The complete discussion in Nedelea *et al.* 2019, 185-252.

¹³³ See for example Cociş 2019, 45-59.

¹³⁴ Donaldson 1985, 349-356; Donaldson 1988, 352; see also Woolliscroft 291-314.; Woolliscroft 2001, 108; Woolliscroft 2010, 13-15; Breeze 2013, 1-19; Bello-Foglia 2014, 38.

1	The theoretical model of A. v. Domaszewski is only partially valid. The system is much more complex; the fortlets and the watchtowers are strategically distributed, based on the micro-topographic settings.
2	The frontier stretch at Porolissum is exceptionally complex and is mainly based on the density of watchtowers and their moral effect.
3	The watchtowers' location at a short distance from each other has a defensive role; they transmit data about the enemy troops' movement to the command centre.
4	The military installations from Porolissum are crucial for the defence of the Meseş Gate pass; they have an extensive visual field.
5	The geographical settings of the auxiliary forts and watchtowers determine approximatively the frontier sectors.
6	Even if there is no British or German-like linear system, the watchtowers, the fortlets, and the auxiliary forts form a unitary defensive system.
7	Although the north-western sector has a simple general pattern and a more complicated detailed pattern, no part of the frontier is left to chance.
8	He adopts J. Baradez's position on the Roman frontier in Numidia: <i>Petit à petit, le limes...est devenu ce que devient toute organisation militaire basée sur la défensive à outrance et sur la fortification: il s'est ossifié et se sclérosa de plus en plus, comme se sclérosent les artères d'un pays dont les forces morales dégénérées ont sans cesse besoin de plus nombreuses défenses statiques pour suppléer à la déficience de son coeur.</i>
9	The Meseş <i>limes</i> is not an obstacle of mediocre value but a coherent system without gaps in the layout.
10	The north-western Roman defence system of Dacia Porolissensis reaches its climax in the 2 nd decade of the 3 rd c. AD, being composed of watchtowers, fortlets, earthen ramparts with defensive ditches, auxiliary forts and a complex road network.

Tab. 1. Ferenczi's theoretical model of the north-western frontier of Dacia Porolissensis. Key ideas.

surveyed and controlled by two stone watchtowers, a stone fortlet and a 3.5 km wall, with multiple phases¹³⁵. There is no possibility of determining the particular distinct sectors based on the spatial distribution of the minor fortifications. The military stamps could be a possibility but only combined with other geostatistical data and when their number will be higher than now¹³⁶.

The so-called unitary defensive system of Ferenczi, distinct from the German or British frontier type, is primarily a local response to a specific local situation, a pattern adaptation to the condition encountered by the Roman army in this area. It is not an automatic product, but a particular system created to fulfil the particular security necessities of Dacia Porolissensis.

The entire coverage of the frontier area and a regular distribution pattern of the frontier installations within the *limites* of Dacia Porolissensis indicate an extensive scale security control that generates a main chain line of watchtowers, doubled by extra-security elements within the most vulnerable areas and access corridors. The Meseş Mountain frontier sector is a typical example of a *mountain frontier* type. Due to its geographical and geomorphological layout, the continuous mountain line represented an optimal condition for the Roman topographers to create a chain line of towers on almost every higher peak with fortlets in the access valleys and linear fortifications within the *hot areas*¹³⁷.

It is prematurely to talk about a climax of the frontier system in Dacia Porolissensis mainly due to the lack of chronological values. However, there cannot be neglected several aspects such as a density of archaeological material generally dated in the second part of the 2nd c. AD within the minor frontier installations.

Instead of conclusions

The aim of this short excursus through Ferenczi's research activity on the frontier of Dacia Porolissensis, covering around 50 years, was to highlight his main achievements but, most of all, to review the vast impact that he had on

¹³⁵ Cociş and Bejinariu 2019, 83-102.

¹³⁶ Cociş 2018a, 399-415.

¹³⁷ Cociş 2018, 34-77.

the Roman frontier studies in Romania both in the field studies and theoretical approaches.

Almost contemporary with him, N. Gudea took a step forward and began extensive archaeological excavations on the minor fortifications located between the auxiliary forts at Bologa (Cluj County) and Tihău (Sălaj County), confirming or refuting previous observations and comments made by Ferenczi. The combined yet different approaches of the mentioned archaeologists form, without question, the complex matter, the central pillar of the 20th c. *Limesforschung* in Transylvania.

As we previously mentioned, it is more than usual to challenge some of Ferenczi's theories today because the Roman frontier studies evolved so much over the last two decades, creating a novelty of data and interpretations together with several new accepted paradigms. The paradigm shift is not possible without previous research, as Ferenczi did with the accepted theories of Buday and Finály.

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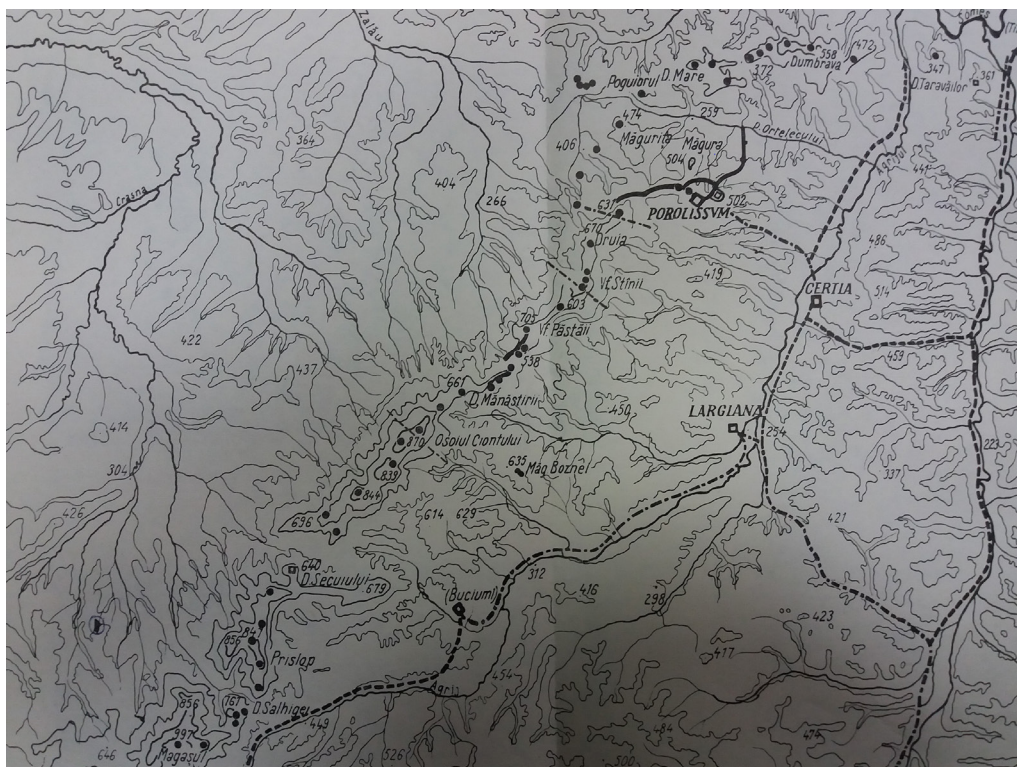
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Pl. 1. Map of the frontier of Dacia Porolissensis (after Deac, Dana 2019, 114, Fig. 1).



Pl. II. The north-western frontier of Dacia Porolissensis – Porolissum area, mapped by I. Ferenczi (after Ferenczi 1941, Pl. I).



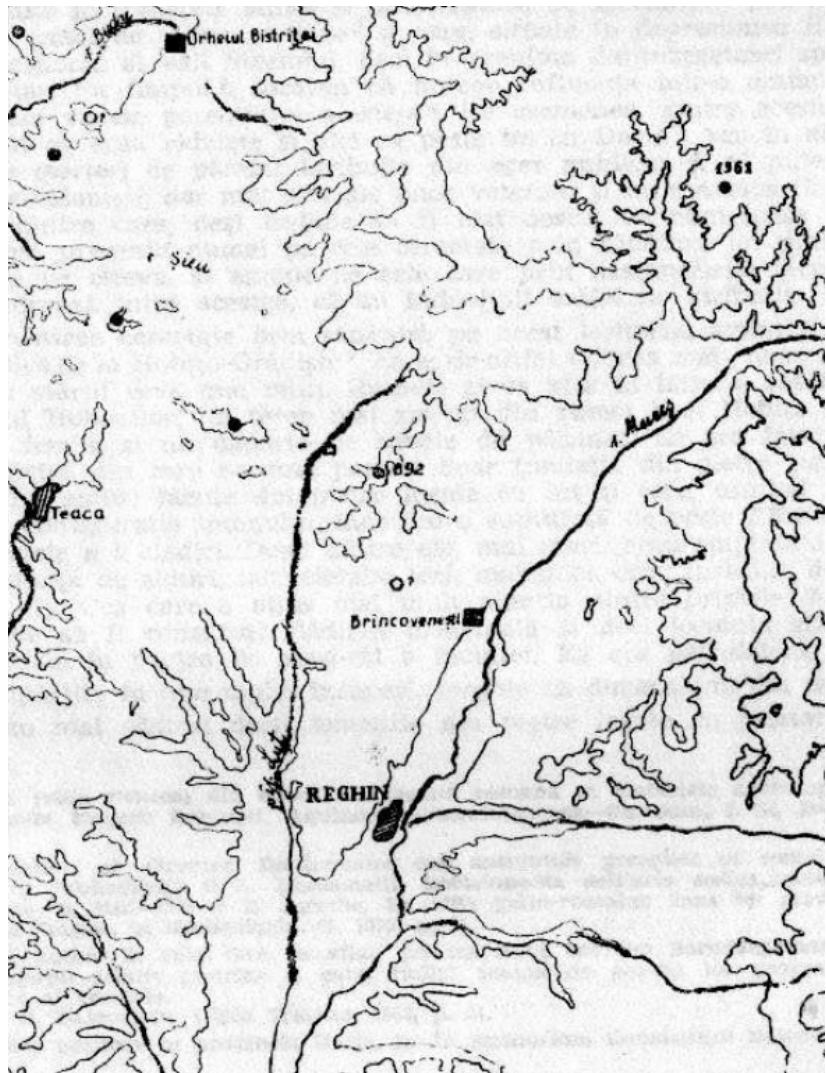
Pl. III. The north-western frontier of Dacia Porolissensis – the Meseș Mountains, mapped by I. (after Ferenczi 1967, Pl. I).



Pl. IV. The northern frontier of Dacia Porolissensis between the auxiliary forts at Tihău and Căseiu, mapped by I. Ferenczi / Samum (after Ferenczi 1988, 187, Fig. 1).



Pl. V. The northern frontier of Dacia Porolissensis between Ileanda (Sălaj County) and Salva (Bistrița-Năsăud County), mapped by I. Ferenczi (after Ferenczi 1973, Pl. I).



Pl. VI. The north-eastern frontier of Dacia Porolissensis between Zagra Valey and Mureș Valey, mapped by I. Ferenczi (after I. Ferenczi 1975, 289, Fig. 1).

