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Balnea militaria

The baths of the auxiliary fortifications of Roman Dacia

PHD THESIS SUMMARY

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Abstract

The present paper aims to study the baths of the Roman army, with an emphasis on the baths of auxiliary units, the most widespread category of bathing facilities recorded throughout the Roman Empire. The thesis includes the comprehensive study of 45 sites and a number of 60 buildings and archaeological structures, most of which represent the bathing facilities of auxiliary forts (*balnea*) located in the settlements near the forts (lat. *vici*), but also the bathing areas which are part of the commander's quarters (lat. *praetorium cum balineo*). For a better understanding of this building category I have considered it useful to review the data on an additional varied selection of buildings that includes: 1) the *thermae* of the legionary camp at

Potaissa 2) baths of the army adapted for civilian use or baths that functioned in areas where the existence a camp is a disputed subject; 3) buildings that operated in important strategic areas without a fortification in the immediate vicinity and 4) two baths incorporated in other structures (*domus, mansion*). The main sources of the thesis consisted of published scientific material dealing with the defensive system of Roman Dacia, which covers a varied and extensive number of articles, monographs and archaeological reports.

The thesis comprises eight chapters, accompanied by a catalog including inscriptions found in the baths of Dacia, a map of the baths discovered in the former Roman province, an explanatory illustration with the hypothetical layout and cross section of a *balneum*, as well as of the interior installations (e.g. the roman heating system), as well as 9 plates incorporating 41 bath layouts and other 43 maps which show the geographical position of the baths and display the relationship between fortification-bath-*vicus*-waterway.

The first chapter briefly presents the subject of the thesis and the means of research. The chapter also pinpoints the main arguments underlying the thesis (e.g. related to the relevance of the topic) and explains the methodology of the paper by formulating both the objectives and the limitations inherent in the approach proposed by the author. Due to the massive accumulation of information in the last decades regarding the province of Dacia and the evolution of research in general we have had a lot of data about recently discovered bathing facilities. They must be interpreted and systematized in the most comprehensive way possible, contextualized with the rest of our knowledge about this province. Roman baths had a functional role, but were important also for social representation, being an important way of extending Roman influence in the provinces. The province of Dacia was a highly militarized province, being mentioned in ancient writings especially in a military context which means that the fortifications on the borders and neighboring settlements were important cores of Roman culture, having a representative role in consolidating Roman cultural models. Therefore, the bathhouses located on the borders of Dacia, in these “social epicenters” represent a necessary subject of study that aids us to understand the diffusion and consolidation of Roman customs in province areas of the Empire. The objectives of the research also included achieving a comprehensive interpretation of the data and providing a broader regional survey of the military baths in Roman Dacia.

The research, in principle, addressed the topic of military baths focusing on three lines of investigation: mapping the natural and built landscape so-called “*limes* strategic landscape”, with

the aim of distinguishing the different placement possibilities and existing local aspects, respectively understanding the social and cultural implications of these baths and the interpretation of the chronological framework in which these facilities were built. The landscape of Roman Dacia was characterized by an impressive number of defensive structures, this combined with the tendency of local archaeological research to focus on military sites produced a relatively large number of publications in the field of border studies. This is also reflected in the study of the baths: the number of bathing facilities located near the camps (in *vici militares*) far exceeds the number of those built in urban contexts. The presence of buildings of this type in the archaeological repertoire is constant. Therefore, I have approached the accumulated data through the prism of border studies, recognizing that this subject matter must be analyzed also from the perspective of the *limes* archaeological landscape as well as of the different decisive stages encountered in the history of the province.

The second chapter contains introductory information on the study of Roman baths and discusses aspects related to terminology, the problems related to the use and interpretation of ancient written sources. At the same time the chapter reviews the history of research in terms of the main topics of the study of roman baths in European research with an emphasis on the main contributions of authors. Important landmarks of the research undertaken at the level of Roman Dacia are also presented mostly from the perspective of the field of frontier studies. The chapter covers the contributions made to the study of bathing facilities from the first publication to those made so far, including case examples where non-invasive methods of archaeological prospecting were used.

The third chapter is the most extensive chapter of this thesis and as I mentioned, it includes information gathered about the baths of the auxiliary units but also includes some interesting case studies (the legionary baths from Potaissa, army baths adapted for civilian use from Drobeta and Romula, the bath from the *domus* in Zăvoi and from the Dacian capital Sarmizegetusa Regia, as well as the baths found the settlements at Alburnus Maior and Șibot) the analysis of which contributed in a significant way to conception of the main results stipulated in the thesis. The systematization of the data recovered from publications included several information categories designed according criteria relevant for the presentation and unitary analysis of military baths in Dacia, such as: 1) general location and in relation to other structures;

2) research history; 3) attested military units; 4) dating and construction phases; 5) planimetry, surface and room dimensions; 6) solution of heat retention and water supply.

The following chapters represent the interpretive chapters and focus on the detailed discussion of the factors that theoretically had an impact on the way in which the military baths of the province of Dacia were built and designed. They address concepts related to planimetry and use of space and focus on the stressed discussion of local features such as the location of buildings, the natural and built landscape in which they are located; the profile of those who frequented these buildings based on the archeological discoveries recovered from the buildings, respectively the chronological classification of the examined baths.

The fourth chapter of the thesis treats the architectural analysis through of baths from a design-oriented approach and wants to answer the question how and why are these buildings designed? The chapter includes a discussion on the origins of the Roman bath, which is related to four topics: the origins of the heating system, the emergence of total immersion pools and communal bathing, the sequential arrangement of heated rooms and the union of the bathing area with exercise. The analysis of ancient sources shows the importance of the region of Ancient Greece and the region of Campania, both having in fact an important role in the emergence of the Roman public bath. At the same time, the stressed discussion of the similarities between the Greek and the Roman bathing model shows that the transition from old to new models took place against the background of an elaborated and efficient heating system and based on the reinterpretation of the bathing experience. In the Roman period, precisely the elevated hypocaust system, with a light construction and extensive coverage allowed the simultaneous heating of several rooms – besides those already present in Greek structures (*laconicum* and *caldarium*) – will allow the integration of pools and area heated different temperatures for large groups of people. Under the influence of Roman culture, the nature of the Greek *gymnasium* (comprising a *palaestra*, a racecourse, sports facilities and the baths themselves called *balaneion*) will change considerably. This will provide bathing opportunities for more visitors. The area for bathing and body care (*balaneion*), which is an auxiliary space in the Greek leisure culture, becomes a main feature of the Roman bath, and the exercising area (*palaestra*) will become a mere additional construction of the Roman baths. With the transition from the Republic to the Principality and the increasing frequenting of Roman baths, the space allocated to heated pools will decrease over

time and instead the number of unheated rooms designed for recreation, i.e. the number of spaces of social interaction” will increase, and the *palaestra* area will acquire a new meaning.

Balnea militaria in the province of Dacia, in particular those associated with the camps of the auxiliary units still bear the reminiscences of the traditions embodied by the first stage of the Roman bath: the sequential arrangement of the main spaces (F-T-C), their utilitarian concept and the limited number of rooms which, however, offer a moderate range of activities. I have found that the vast majority of Roman baths in Dacia have a central bathing suite consisting of the main areas, with and without total immersion pools (F-T-C / A-F-T-C), which are accompanied on the outer walls by other secondary areas: *laconicum*, *elaeothesium* / *destrictarium*, *palaestra*, or doubled spaces (e.g. a second *tepidarium*). We know that this bath-model becomes very widespread beginning with the middle of the first century and is enjoyed popularity, especially in the provinces. These small buildings with a simple room arrangement follow the 2-Krencker model conventionally named “Ringtyp”. However, we have examples of bathhouses designed after the 1-Krencker or “Reihentyp” model with the principle bathing areas arranged in a line illustrated by the baths placed inside the praetoria of auxiliary camps. On some layouts we notice the possible signs of a transition from the first model to the second. The baths of the auxiliary fortifications in Dacia have been designed with several heated rooms, forming a single bathing circuit and very often include a small hot room with a specialized function, a *laconicum*. The *caldarium* is one of the most important spaces, an essential area in the layout of every military *balneum* in Dacia and I have found that in most cases the *caldarium* is a relatively isolated room, located in a corner of the building. A simple explanation consists in the fact that often the heated areas are arranged separately (grouped) from the unheated ones, illustrated by several examples in Dacia. The spaces equipped with heating installations are a majority in Dacia and we can assert: 1) the widespread use of the *laconicum* area; 2) the clustering of warm areas, or the separation of the unheated spaces from the heated ones; 3) the reduced surface of the *frigidarium*. We have a fairly large number of buildings where the architects deserted the idea of a *caldarium* with an apse or a circular *laconicum* and chose a rectangular shape for said areas, moreover, there are situations in which apse structures are completely missing from the layout of the baths. The “Ringtyp” model has proven to be very efficient in maintaining warm temperatures because the common walls of the bathing areas contribute to streamlining the heating process, thus becoming common, especially in the provinces. However, this solution is combined with several other

solutions (e.g. separate heating of the walls or the adjoining placement of hot spaces) and resulted in the abandonment of the circular and semicircular shapes applied to retain heat. Probably the most typical way to counteract the drop in temperature was radiant heating, allowing builders to use shapes that do not require as much effort and time as an apse or other circular shapes. (semi-oval or semi-circular). Heated walls are attested through fragments of *tegula mammata* which formed a narrow space through which the hot air passed from the *praefurnium*, transforming the walls into the main heating surfaces of the bath. At the same time, fragments of *tubuli* (ceramic box tiles) recovered from the excavations acted as ceramic pipes contributing to the supply of hot air. Probably the most unique heating measure used in Dacia was developed after the Greek bath model: heating corridors (in the substructure of the bathroom) were employed to heat only a section of the room, not the whole surface – documented through excavation carried out in Micia and Potaissa. Another solution is the use of smaller ceramic tubes made in the form of a “spool” with a perforation along its entire length, which were inserted into the interior part of the walls through T-shaped iron nails. The solution attested in Slăveni and Cioroiu Nou allowed the existence of a free space of less than approx. 3 cm, which in fact does not allow the passage of hot air but provides protection against moisture.

At the same time, the baths in Dacia which developed in a military context that ended up being adapted for civilian use, and those already built in a proto-urban or flourishing environment usually incorporate a *palaestra*. It is understandable that the elaboration or extension of the simple, functional bath model is linked to the larger proto-urban settlements and “economic centers” characterized by greater flow of people. These buildings end up having layouts developed in a double system (with doubled rooms) or have attached a *palaestra*, respectively in some cases several rooms with uncertain function, the most pertinent examples being Micia and Buridava, but also Boița. Therefore, part of the bathhouses located in *vici militares* designed with a secondary bathing suite adjacent to the main bathing areas provide a more complex range of activities.

In the fifth chapter of the thesis approached the subject of baths from the perspective of the military environment, the relationship between fortification-bath-*vici* and contains numerous data on the defensive system and the administration of the province. The chapter wants to formulate some answers to the question: where were these buildings designed? The proposed approach places archeological sites back into their context of discovery and focuses on the

disposition and location of the baths in relation to other structures: fortifications (inside or outside) and their interior buildings (*retentura* or *praetorium*), the proximity to different types of settlements or custom points. At the same time, the proximity of natural resources is just as important, e.g. the vicinity of gold areas, areas with salt deposits or important rivers. Judging from this point of view, the baths of the auxiliary units are divided into three categories: 1) baths located inside the auxiliary fortifications (Cioroiu Nou); 2) those incorporated in the residence of the commander (*praetorium*); 3) baths located in the neighbouring settlements, these representing in fact the most widespread category in Dacia.

We find that in this part of the Empire also the *praetoria* of the auxiliary camps had a bathing area or at least a *lavacrum* (a single bathing room). However, the difficulties of identifying these bathing areas cannot be overlooked. The problem must be approached from the perspective of the layout of Roman houses, given that the *praetorium* itself is the commander's house. At the same time, we must consider the existence of a possible connection between the Roman dwellings of the Republic period and the development of the first Roman baths, which had a simple linear layout. The *balnearium* baths of the early Roman households consist of two or three rooms lined up on an axis, located in the proximity of a heat source, usually the kitchen or attached directly to the kitchen. This trend is also observed in the *praetoria* of Dacia: the bathing area is located closer to the private quarters reserved for the family (heated rooms), but especially in the vicinity of a heat source: a kitchen or a metal recycling workshop. The most pertinent example is the *praetorium* from Cășeiu, but Ilișua is also worth mentioning. The well-documented *praetorium* in Cășeiu provided valuable information. A reinterpretation of the available data showed that it incorporates a bath located near the kitchen area, perpendicular to the south wing where the family's private quarters are located. The family wing also includes a *triclinium* area and spaces associated with a *fabrica*, a metal smelting workshop in the southeast corner. The entire wing on which the mentioned areas are placed has heating installations and as such, we are also able to locate the bathing area: on the wing of the heated areas, near the heated rooms reserved for the family next to the kitchen.

Among the main topics addressed in this thesis, however, are the military baths located outside the camps in the neighboring settlements. The placement analysis of the sites allowed us to outline some concepts that resonate with the results of the architectural analysis. I have identified an interesting category of sites, the military baths of the *vici* adapted for civilian use,

which are correlated with the importance and economic development registered on the territory of the settlement. This category appears as a logical consequence of obtaining the status of *municipium* or *colonia*, but for the most part their construction is related to the increase in the number of visitors. These bathhouses are designed for a wider audience, producing a change in their architectural design and in the complexity of the plan. Upon reviewing the published material I have noticed that two categories of baths can be identified, linked to both military and civilian environment: 1) baths located in important places of exploitation the most pertinent example being Buridava, but we must also mention Şibot, Alburnus Maior; 2) important economic centers (customs points, passes, river crossings, etc.) the most relevant example being Micia, Boița but we must also mention Porolissum. Additionally, I have also mentioned the baths of Drobeta and Romula (even though they developed in cities), these places being important strategic points, which are associated with river crossings. From the data processed so far, we I have found that most of them are equipped with a *palaestra* and this typicality should be interpreted in accordance with our information about the role of the *palaestra*. The closer examination of baths located in settlements reveals important data that may explain the presence or absence of a *palaestra*. The existence of this room is associated with areas intended for social interaction and establishing new trade relations, representing a progress from the functional and modest bathhouses towards the larger baths, such as the Imperial *thermae*. The reoccurring use of the *palaestra* eludes changes that shaped the needs of the clientele and show they have had a direct impact on general architectural solutions and the use of space in baths. The presence of a *palaestra* suggests that more space was needed for interaction, so we can deduce that the bathing facilities mentioned enjoyed notoriety.

In the sixth chapter I have analyzed the data regarding the social categories that frequented, most likely these baths. The chapter wants to answer the question: by whom were these baths frequented? Based on the available data, I managed to discuss only in general terms the categories of archaeological objects that found in the military baths of the province of Dacia and the activities to which they relate. I have also decided to address the issues related to the presence of women in military bathhouses based on archaeological discoveries and written sources. Daily life in the baths often involves the same habits and so inventory of objects found in the legionary baths of the Potaissa and the auxiliary ones is remarkably similar. The analysis of the findings shows that in addition to bathing and maintaining corporal hygiene activities of

leisure such as, consumption of drinks and food was normal in the baths of the auxiliary camps. In most cases, the pottery found, fragment of ceramic vessels suggests that the banquet was part of the daily habit in more modest baths also. In the category of essential accessories for bathing, in Latin *instrumentum balnei* we find several types of objects related to grooming (mirrors, containers for oil, blades, razors), but in the current state of research we can say that the repertory of archeological discoveries retrieved from the auxiliary camp baths doesn't include any *strigiles*. At the same time, they are recorded in a few cases on the territory of the camps, for example at Buciumi, Porolissum, so we can conclude that they were common also among the soldiers of the auxiliary units.

The reviewed material revealed that the baths in the local settlements but also in the proto-urban centers had a rather diminished exposure. We have little data (e.g. *tesserae*) attesting the presence of the passing clientele, traders (except for the *balneum* from Cioroiu Nou). However, this is also because publications discussing the discoveries found in Roman baths, like those found in the of military bases of Dacia are remarkably rare, and most of the published artifacts are meant for illustrative purposes only. It is very probable that the baths located in Dacia were used by the civilian population, but obviously also by soldiers, there are also indications that they were also used by women. My research has shown that hairpins and beads remain among the few items that really indicate the presence of women, while ornaments and jewelry are classified as "possibly feminine" items. The discoveries from Dacia indicate that the presence of women in the bathrooms near the auxiliary camps is attested, but it is limited, also explained by Hadrian's interdiction decree.

Due to the way of recording the archaeological finds, the unclear establishment of the contexts (which area of the building) and last but not least, to the few cases in which the archaeological material from the bathroom is published in detail, conducting a deeper investigation into the distribution of objects or a quantitative analysis of the findings recovered from the baths was not possible. I decided to also approach the difficulties of evaluating the presence of the natives (more precisely of the Dacian community) in the baths near the camps. We can say that the presence of Dacian pottery in rural contexts, particularly in the baths of the *vici* is limited and we are not sure that it indicates that these buildings were used by the native population of the Dacians. We can hypothesize that the lack of the local Dacian elite and the possible marginalization of the community, as well as the lack of integration of native

communities in Roman troops show that there were simply no conditions for the implementation of certain Roman models among the local population. We can only assume what influence this had on the aspects of the use of bathhouses of the *vici militares* or those adapted for civilian use in urban areas.

In the seventh chapter I decided to review the information available from publications on the possibilities of dating the military baths found in the province of Dacia, in order to provide a better chronological classification. The political and military events had a direct impact on the construction of the forts and the bathing facilities found in their vicinity, as well as on the urban development of the province and the baths located important settlements. The chapter includes a discussion about the possibilities and limitations of establishing when these baths were built. Given daily rigorous maintenance work was carried out daily in every Roman bath and this did not allow for the accumulation of small finds, we must remember that a considerable part of the numismatic evidence (apart from those recovered from drains or other safe contexts) work as "*terminus post quem*", useful for dating the structure. On the other hand, the epigraphic evidence recovered (inscriptions of monuments and ceramic building material marked with the stamp of the unit that built the bathhouse) represents the most important source we have regarding the construction date of a building. Where possible, based on the well documented history of a troop's mobility we were able to reconstruct the time frame during which with all likelihood the bathhouse was built, or at least determine when this process began.

In the light of our current knowledge, we can make the assertion that the construction works related to bathhouses have remained constant throughout the existence of the province of Dacia. Four chronological groups of baths are outlined, with possible hypothetical subgroups. We find that the majority of military bathhouses were erected throughout the 2nd century and in the first part of the 3rd century. Most bathing facilities pertaining to auxiliary forts were erected starting with Hadrian or after, under Antoninus Pius. We also have the particular situation of a few forts and their baths erected before the formation of the province, just only after the first Dacian war of Trajan (101-102), located in the Teleajen Valley in the northeastern part of Muntenia – though, these remained in use only for a short period, until the reorganization of the province under Hadrian in 118. We also have a few examples of *balneum militare* build during the second half of the 2nd century, after the events marked by the Marcomannic wars, under Commodus. Starting with the Septimius Severus, a multitude of repairs take place in these baths,

parallel with the intense building regime typical for this period in the entire Roman Empire. This is especially true for the baths located in settlements that register a high economic growth and receive the title of *municipium* or *colonia* under the Severian dynasty. At the same time, regarding the next period, we must mention that we have little data to indicate the continuation of the use of military baths after the withdrawal of the Roman army from Dacia. Despite the fact that in several regions of the province once the army encountered difficulties or Rome withdrew its troops, the bathhouses of the forts were modified according to current circumstances and requirements, often involving reducing the surface area or reusing a number of rooms for other purposes. After the withdrawal of the army from Dacia, most of the bathhouses are disused or simply destroyed. Exceptions to the case are Micia, Brusturi, Buridava but also Drobeta where the buildings continue to be used in one form or another.

The results were integrated in the eighth chapter of the thesis, where I returned to some ideas previously discussed in detail, insisting on the essential points and I tried to provide a complete synthesis of the results obtained in each separate chapter. The thesis proves that the category of *limes* baths, essentially the bathing facilities of the auxiliary forts, has a variety of aspects and problems which, if approached accordingly, from the perspective of the design process, free the researcher from the constraints and limitations indoctrinated by the previous phases of research. It also allows us to redefine the scientific value of military baths in general. I have come to the conclusion that they represent the first stage of progress registered in the development of the imperial baths, after the house-baths of the Republic period and are located in front of the baths of the legionary fortifications, the so-called “Caerleon-type baths”. The results of the paper provided new knowledge regarding three central topics: it proved the variety of the military *balneum* genre and listed several categories widespread in Dacia, it exposed some of the particular / local solutions applied in the design of bathhouses of this region and it provided new data on the different bathing experiences typical in the province of Dacia. Broadly speaking, we can conclude that the baths of the auxiliary troops in Dacia are simple buildings, with a number of rooms reserved for pools with water and bathing and as we found the areas reserved for collective interaction are few in number, but still present.

Many of the baths in Dacia do not radically change their layout, so there are some limitations imposed, about which we cannot say with certainty if they are related to a problem of natural resources, human labor or stand in connection with the historical events that defined the

province of Dacia (e.g. frequent attacks by barbarian populations). The continuity in their concept throughout the period of Roman occupation demonstrates that there was no considerable increase in the frequency of the baths located near auxiliary forts, but they represented a constant aspect of the Roman culture in the province.

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