



DACIAN FORTIFICATION. PRINCIPLES OF CLASSIFICATION

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Abstract: *The Dacian fortification is an emblematic chapter of the value and creativity of our predecessors. The destinations of the settlements and their internal organization stand for original arrangements of defensive fighting systems with specific characteristic, wich provide indications of their own traditions, in an original approach but with integration in the military architecture of the antiquity. The overwall picture of the Dacian fortifications sends throughout history a modernist concept by shaping the framework of everyday life and by the military aspects used in the preparation of defense against invaders.*

Keywords: *fortification; fortified settlement; stronghold.*

Around 60 b.C., the first ancient Geto-Dacian documentary sources refer to the military actions during the great *Burebista* (82 b.C. – 44 b.C.), the founder of the geto-dacian state against the tribes *oxen* and *taurians* that he conquered through a quick military campaign when they invaded the today territory of Slovakia¹. Another proof of the strength of the Dacian state is another moment in history, shortly after the brief peace concluded with the Roman Empire, during the war of 101 a.d.-102 a.d., when *Decebal* (about 55-60 a.d.-106 a.d.), removed by the force of arms, the *iazzyges-sarmatian* who occupied the Dacian territories, from the Western plain of the current Banat². Therefore, some historians support the idea that the *Emperor Traian* (98 a.d.-117 a.d.) refused to give to *iazzyges-sarmatian*, his allies, these lands, as, according to the thinking of the winner, it was due to be theirs by conquest³.

In the study of Antiquity for the Dacian fortresses and strongholds, the location and placement of these were a serious challenge for many researchers. It is assumed that two centuries ago it was not even established the topographical

location of the Dacian capital – *Sarmizegetusa Regia*. It was believed that the *Emperor Trajan* (98 a.d.-117 a.d.) was the one who established the localion of *Sarmizegetusa*, where it existed until the summer of 106 a.d. These assumptions were determined by the lack of ancient written sources and traces that would have allowed establishing the role and chronological classification of the settlement; It turned on, by the expansion of archeological excavations and by many and conclusive evidence that *Dacia* represented a complex and well-organized system of fortifications, and *Sarmizegetusa Regia* was not a single and isolated fortress between the mountains⁴.

By good examples we can present and describe the existence in Romania of various repertoires of Dacian-Roman fortifications, with multiple resonances that have left their pregnant mark on the Dacian culture and civilization. A different approach in our research in relation to all archaeological studies could demonstrate that there can not be stated a certain typology of ancient fortifications in general, nor in the world, because much of the scientific information published is incomplete and many sites are still archaeologically unloaded and may bring further items in the development of fortifications, starting even from the manifestation of political, military, administrative, social and economic influences of a people or certain geographical area which may be organized in an uncertain shape, at a time.

¹ Strabon, *Geografia*, VII, 3, Bucharest, 1964, pp. 239-240.

² Dio Cassius, *Roman history*, LXVII, 10.

³ L. Marghitan, *Dacian fortresses and Roman*, Military Publishing House, Bucharest, 1978, pp.11-12.

⁴ Idem, pp. 6-7.

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In Romania, the crucial moment in the evolution of the ancient fortifications of the former Roman-Dacia was during the Aurelian withdrawal, at the end of 271 a.d. The Aurelian withdrawal represented the reduction of the empire's borders, by evacuating the army and administration from the Roman-Dacia. The Roman-Dacia was made up from the current provinces of Transylvania, Banat, Oltenia and Muntenia part to Rucăr. Many historians join the beginning of Aurelian withdrawal to the end of the Roman occupation⁵, because of the actions of Germanic migratory peoples at North of the Danube, as well as of the free Dacians' uprising organized in *costobocae* and *carpi*; executed in two phases, begun in late 271 a.d. and completed in 275 a.d., write down the historical sources that, following the victory of the Roman Empire against the *goths*, the Roman-Dacia was ceded to the latter, on the condition to defend at the north of the Danube the new borders of the empire. The Aurelian withdrawal is explained by *Radu Mihai Crisan* in the book *All for Christ! The Political will of Nicolae Iorga*, on pages 16 to 17, using the very

words of the great Romanian historian⁶: *...,The Empire could not cede Traian's Dacia, in a formal way, to the barbarians whose establishment would had been considered as outside its legal borders and representing a permanent military danger. The very notion of the state as the Romans had, would have opposed it, in the most absolute manner... These goths known for a long time and with which, however, from time to time, had peaceful relations could be used to defend the border itself in the sense that I indicated. Emperors used for decades for their skill barbaric legions cavalry contingent, as they sat in Gallia many German settlers that the owners of the lands close to the border were looking for their physical vigor. The systems of federations that was paid the service – that only the modern conception of prestige could make it to be considered as a tribute and the tribute as a humiliation – it was more comfortable than the expensive maintenance of the legions; they were allowed to live on the subsidies and gifts on which an agreement had been reached at the expense of residents, whom in turn was no longer required the*



Fig. 1. Tabula Peutingeriana, Source: <http://www.istrianet.org/istria/cartography/history/peutinger-table.htm/>, accessed to 05.06.2017

⁵ Source: http://ro.metapedia.org/wiki/Withdrawal_aurelian, accessed to 21.12.2016.

⁶ Idem, accessed to 21.12.2016.



contribution due to the state, which, after all, was the same..."

The existence and continuity of the Daco-Romanians at the north of the Danube was established not long after the Aurelian withdrawal in 275 a.d., by publishing a Roman commercial map *Tabula Peutingeriana* in 330 a.d., since the reign of the *Emperor Constantin cel Mare* (272 a.d. - 337 a.d.). On the commercial map *Tabula Peutingeriana*, figure 1, there written down no less than 88 cities both north and south of the Danube and highlights the strong trade links of the empire with its adjacent areas⁷.

The trade itself demonstrates a permanent activity in the economic, organizational and administrative areas by the Romans areas abandoned by Aurelian withdrawal. It is when most experts and historians speak of early *romanization* and *christianization* communities North and South of the Danube; this reality is supported by the appearance of religious objects and tombs of Christian worship. None of the migratory peoples who threatened the Roman-Dacia, were Christian and thus they did not even belong geographically to these areas. The first Romanian latin name, *Peter*, was discovered on a pot made of clay, dated back in the 3rd century a.d. in the Roman camp *Capidava* (*Constanța county*)⁸.

Concerns for the study and research of the Roman-Dacia's military history have their beginnings in the XVII the century by *Luigi Ferdinand Marigli diaries* (1658-1730), the famous military expert and engineer in the army of *Emperor Leopold I* (1640-1705).

During the wars with the Turks in Transylvania, Muntenia, Oltenia and Banat, he researched, during the year 1689, the ruins of the Roman cities, roads and camps. These surveys and polls were translated into detailed plans of the fortifications and presented in an outstanding work: *Danubius Pannonico-mysicus obervationibus geographicis, astronomicis, hydrographicis, historicis, phisicis, perlustratus Hague-Amsterdam, 1726, volume II, reprinted under the title Description du Danube, etc., The Hague, 1744, Volume II*⁹.

⁷ Source: <http://www.descopera.ro/cultura/-cum-au-uitat-romanii-un-mileniu-de-istorie>, accessed to 22.12.2016.

⁸ *Idem*, accessed to 22.12.2016.

⁹ Col. dr. Cristian M. Vlădescu, *The roman army in Dacia inferior*, Military Publishing House, Bucharest, 1983, pp.15-16.

The researches have continued in the first half of the nineteenth century by the ban *Mihalache Ghica* (1801-1872) between 1832-1842 in Oltenia, major *Dimitrie Papazoglu* (1811-1892), *Cezar Bolliac* (1813-1881), *August Trebnoiu Laurian* (1810-1881), *epigrapher Carol Torma* (1815-1862), the Prussian consul in Bucharest, *J.F. Neigebauer* (1783-1866), *Vasile Pârvan* (1882-1927) and many others who are part of the the pioneering study of the ancient fortifications in the research of modern fortress.

Much of the literature written and analyzed describes a broad and detailed archaeological inventory for each location and fortification studied over time. It would be useless to focus our research on an identity that draws only the historical value and the typology of elements in a detailed record, the uniqueness of a site in a given period of antiquity. These are generally signs that mark everyday life in antiquity, but also the possibilities regarding the applied technique in the implementation and execution of the fortifications.

We can not move on without treating the issue of the architecture of buildings, the materials used, the urbanization of a group of civils which formed and represented the city life, often insufficiently, with underground constructions, tunnels and secret passages rescue and reorganization against the invaders.

During the war in 105 a.d., when the Dacian troops withdrew at Decebal's order (about 55-60 b.C.-106 b.C.), although the Romans sent troops in pursuit of them, the existence of underground roads gave time to Decebal to change on the spot the situation of the war by regrouping of the forces and providing a new space for maneuver. Some authors argue that in addition to betrayals among its leaders, it moved combat to the south of the Danube, even on the Roman territory, bringing significant losses to the Roman army due to the existence of secret underground passages. Not expecting such a change of situation, during winter that would have made even more difficult the movement of the Dacian army in such a short time, *Emperor Trajan* manages to capture the retreat of the Dacians towards *Sarmizegetusa Regia* and ordered the blocking of tunnels,¹⁰ including the

¹⁰ Emil Străinu, *Foray into the underworld*, Triumf Publishing House, Bucharest, 2011, pp. 30-31.



destruction of water pipes supplying the city¹¹.

We will not stop to the presentation of technical details regarding the sizes and dimensions of such categories of works, the strategic position occupied for an isolated location, but our research focus, besides military and civilian buildings, by analogy and extensive comparison, on the internal organization and principles which preserve the capabilities and performance of ancient fortification. During antiquity, to build fortifications there is no rule of homogeneity, uniformity of the functions as a destination, as their plane geometry. The conduct and their positioning on some form of relief, valley, mountain, hill or stream, represented the choices of the military strategist who investigated the possibilities of achieving the purpose according to the geographical area that determined a certain fluidity and mobility of the military systems and operations. *Decebal* skilled in combat and strategy, did not have the military superiority of the Roman Empire, but was favored by fighting on own land that highlighted all the advantages given by the known land; assimilated with genistic arrangements or forms dominated by the heights of the land, determine the need to ensure a certain degree of protection¹². Forest and mountains occupied a considerable area of Dacia and had a significant impact on the combat because of the unlimited possibilities to identify the advantages of creating superiority and mobility regardless of direct attack or surprise of the opponent. The spread of forests and the percentages of their occupation in antiquity is an impossible issue to restore today in detail, in Dacia¹³. A living testimony of the Dacians' military strategy and of their military victories is confirmed in the writings about the art of war, of general *Carl von Clausewitz (1780-1831)*: „*the country to be crossed by many valleys and to be inaccessible, due to mountains or forests and wetland, because of the nature of crops.*”¹⁴ Therefore, many studies have

tried to define the concept of ancient fortification including by extension the Dacian fortifications, according to certain criteria which seem to have no concept or rule, at their turn, based on well-defined criteria.

The first classification criterion was the *chronological* one, determining the physical state of fortification, the emergence and evolution of the common elements of composition, formation of complex military defense, taking into account the level of development, social organization, administration at a certain time. These defense systems were: *developed or less developed*¹⁵. Development through reuse and rebuilding of fortifications on the same site shows an objective look, of rearrangement and permanent recovery, depending on the performance of defense items and of the used construction materials. Occupying the high landforms conferring military advantages in the way of attack, is the first consideration viable in the definition of ancient fortification, adding to it multiple possibilities to cover or to ensure convenient battle positions against invaders. The Dacian fortifications were built and modeled depending on the configuration of the land, an aspect that determines the orientation of the entire settlement¹⁶. There are not analyzed in the researched studies the establishment and the revealing of the cronology of a fortification, the multiple capabilities to create offensive, strategies or operative tactics on defense or mitigation of military action; the described structure is simple, limited to the archaeological site studied without comparative references to other geographical areas of the world, enabling expanding their vision. Therefore, we consider in our research, the use of a *chronological* classification of fortifications as incomplete and not leading to any finality. I would add a further key reason, resulted from the analyzed archeological studies, related to water sources of ancient fortifications, which, exceptionally, were not in the area of fortified settlements¹⁷. Some places are found in closed areas, to the first sources of natural water, confirming once again our

¹¹ Source: http://adevarul.ro/locale/hunedoara/enigmele-cetatile-dacice-bijuteriile-ingineriei-lumea-antica-ajuns-conducte-apa-drumuri-pavate-asezarile-lux-culmile-muntilor-1_56acde205ab6550cb8475627/index.html/, accessed to 20.04.2017.

¹² Col. dr. Gheorghe Tudor, *Army geto-dacian*, Military Publishing House, Bucharest, 1986, pp.12-13.

¹³ Ioan Glodariu, *Dacian architecture, civil and military*, Dacia Publishing House, Cluj-Napoca, 1983, pp.59-60.

¹⁴ Carl von Clausewitz, *On war*, Military Publishing House, Bucharest, pp. 451-452.

¹⁵ Hann Felician, *Brief history of development in Romania permanent fortification*, Military Academy Publishing House, Bucharest, 1958, pp. 5-7.

¹⁶ Nicolae Branga, *Urban Roman Dacia*, Facla Publishing House, Timișoara, 1980, pp. 10-11.

¹⁷ Ioan Glodariu, *Dacian architecture, civil and military*, Dacia Publishing House, Cluj-Napoca, 1983, pp. 59-60.

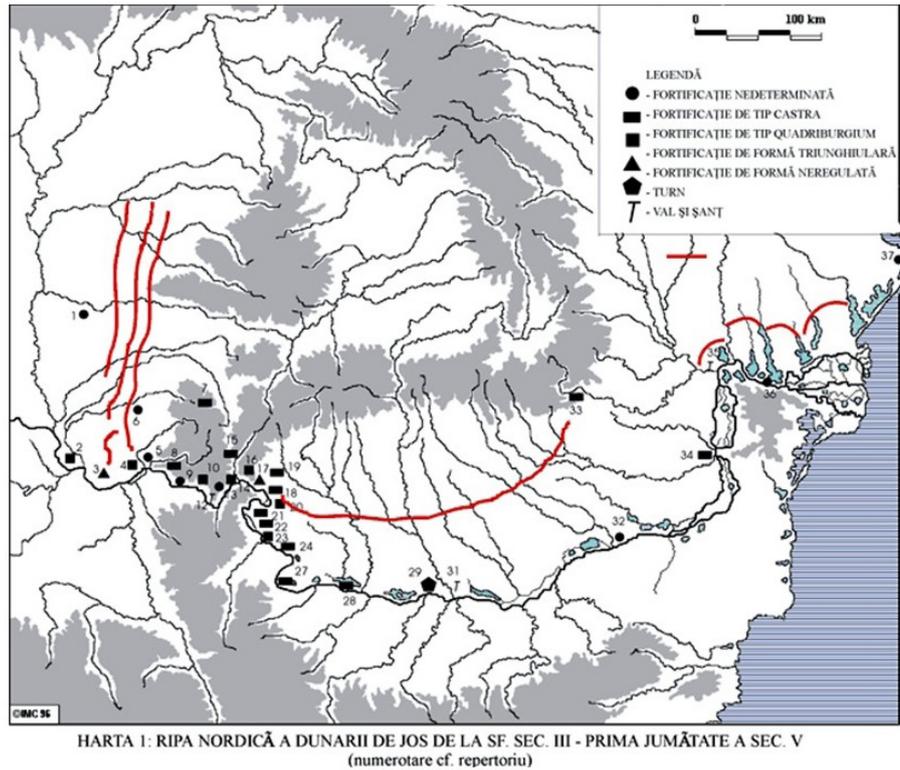


Fig. 2. Map representation typology type fortifications quadriburgium. Source: <http://apar.archaeology.ro/bondoc.htm#valuri/>, accessed to 03.01.2017

conclusions that in the choosing of the placement of a fortification counted more the defense military principles of occupying an advantageous point for the battle, which is not related to a certain period, in shaping the decision for site selection.

Some authors and researchers of ancient fortified systems send us to another approach in determining the classification, *their geometric shape*. The references related to these types are determined by uncertainties referring to topography, complex reconstruction plans in 3D digital, embodiment of the fortifications and of each type of building or their components. And these new framings are limiting because they refer, according to some researchers, just to the fortifications in the southern part of Danube, specific to the *Emperor Diocletian (284 a.d.-305 a.d.)* and *Emperor Constantin the Great (307 a.d.-337 a.d.)* times, finding them under the name *quadriburgium*¹⁸ (details the figure 2).

Fortifications belonging to the typology, after the geometric shape in plan rather than by purpose, is decisive in determining the strategy and tactics of defense. Such classification is shown simplistically

recalling the description of the structural form: *fortification type castra* quadrilateral shape with corner towers protrude from the enclosure, *the fortification type quadriburgium* consisting of new construction, of a quadrangular corner towers squares, round, *triangular fortification* with round corner towers protrude from the walls, the *fortress of polygonal*, irregular large and *fortification an observation and signaling towers* with small, non-defensive¹⁹.

We will continue with the multiple analysis of the archeological studies and epigraphic writings which develop, from other points of view, the issues of classifying ancient fortifications without reference to a classification in terms of time or geomtrice form. We distinguish another approach in classification of ancient fortifications, for the historical period of the 2nd century a.d. and the 1st century a.d. Even if the descriptive principles in the selection and establishment of fortifications, offered by the natural configuration of the land are obeyed. The ancient fortifications did not have a high level of security against an attack, thus requiring a permanent restoration against fire or the use of means of destruction. It can be appreciated that

¹⁸ Sursa: <http://apar.archaeology.ro/bondoc.htm#valuri/>, accessed to 03.01.2017.

¹⁹ Idem, accessed to 03.01.2017.



the level of safety of a fortification was different depending on location and it was conditioned by decision making in establishing safety measures against the attackers. Some researchers have classified for the period above mentioned three types of fortifications namely: fortified settlement specific to the fortification where the settlement and population extend outside the fortified space, the *stronghold*, a specific location where they conduct an attack and fortification only joint military or independent fortification situated in areas where to protect certain regions or roadways²⁰. These categories regarding the classification and definition of types of Dacian fortresses refer only to a short period for a certain historical period studied. It is based on the general principles for constructing fortification, based on archaeological sites studied, the findings being established „*only from the role, purpose and character of fortification of any kind, independent of nature, crowd, the size of fortification elements and the area fortified*”²¹. Here comes the fact that the evolution of fortification is strictly related to urban and social development of settlements. In addition to the military aspect which is significant in ensuring the permanence of settlements, regardless of its size in a geographical area, the occupation of an important position in economic exchanges, made the development of the fortifications to be a difficult one to characterize, and a certain typology not to be determined only based on historical perspective.

We can not refer only to a historical period of ancient Dacian fortresses in the classification. The principles of the embodiment differs in position and location, and a classification thereof, in our point of view, can be made only after the *elements that make up the fortification*. We believe that any analysis, no matter its level of detail, on the space of the ancient Dacia, at any time we find structures and basic elements that define and determine the performance and security against attackers; and presentations and details in a list can not go beyond the frame of a simple enlisting that may define and classify, by formation, a certain type of fortification, mingled with the dangers and threats of invaders.

In our research we have established, although some researchers try to continually redefine this

concept, in terms of classifying the fortification, in determining the correct description and placement in history remain *chronological and elements that make up the fortress*. Any archaeological object that can date processing technologies of materials, type and diversity of tools, religious objects and weapons discovered, can not replace the ability and mastery in policy defense system that is rediscovering the stone walls, stone towers, civil engineering, and secret underground passages built that establish again reorganization and change of strategy of the fight against imminent attack.

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²⁰ Ioan Glodariu, *Dacian architecture, civil and military*, Dacia Publishing House, Cluj-Napoca, 1983, pp. 49-50.

²¹ *Idem*, pp. 49-50.