WEST AND NORTH WEST OF DACIA SHORTLY BEFORE THE ROMAN CONQUEST

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GEOGRAPHIC CONTEXT

From geographic point of view, the area in question represents an interesting symmetry. Mountain chains flank those six main rivers, which flow westwards and northwestwards delimiting the area discussed further (pl. 1). *The Mures* is separated from the *Crisul Alb* by the *Zarandul Mountains. Masivul Moma Codru* is situated between the *Crisul Alb* and the *Crisul Negru*. The *Mountains Padurea Craiului* and the *Mountains Bihorului* are as well between the *Crisul Negru* and the *Crisul Repede. Barcaul* is delimited by the *Crisul Repede,* the *Mountains Padurea Craiului* and the *Mountains Plopisului* from where it springs. Between the rivers, *Barcau* and *Crasna* (pl. 1) are placed *Silvania Hills,* which determine the *Crasna* to create a defile to evade the majestic *Magura of Simleul.*

Valleys of these rivers, as they flow open large ravines, sometimes doubled, between mountain and foothills chains (*Depresiune Brad, Holod, Beius, Depresiune Simleu* etc.).

Considering this we can affirm that within the delimited area we have 59 non-fortified settlements (two of which are in caves), 10 fortified settlements (one of which is for refuge) and 17 fortresses (Annex 1). These circa 90 points of discoveries are situated within the borders of 64 modern localities. Only one-third (31) of the sites have enjoyed systematic archeological dig, what is more published in brief. In 9 of those there have been carried out only small-scale sondages. 40 sites have been studied only superficially. Unequal volume of information regarding fortifications and not only, especially of bibliographic nature interferes in the process of chronologic analysis, which concerns functioning and character of such type of construction.

Before that, it should be stated that the map of the plate 1 allows us to establish the existence of three big conglomerations of Dacian settlements and fortifications, situated in big geographic unities.

The first grouping is observed in the *Mures* basin, northwards the river, where we ascertain the presence of not less than three fortresses, four fortified settlements and 15 non-fortified settlements. Such density can be explained by the special importance of the *Mures* as a trade route and access road as well as by the river flood-lands wealth.

The second conglomerate of fortifications and settlements is situated on the *Crisul Alb, Crisul Negru* and *Crisul Repede* and their confluents. In this case, we have three fortresses and a fortified settlement alongside with only 5 non-fortified settlements. On the *Crisul Negru* we ascertain the presence of only two fortresses. Such penury is certainly explained by the level of the area research.

In the basin of the *Crisul Repede* there were identified only two fortresses, one fortified settlement and 12 non-fortified settlements, two of which are in caves. Overall, on *Crisuri* there have been determined 2 fortified settlements, 17 non-fortified and 7 fortresses.

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Being well outlined from geographic point of view, *Depresiune Simleu*, the third conglomerate of the Dacian discoveries, is marked by geologic formations, which prevent acces inside. They are the *Meses Mountains, Plopis Mountains, Simleu Magura, Salajul Hills* (Mac, Idu 1992, 39-47). Principle entrance "gates" to the ravines, all of which are situated in water-ways valleys, in the Dacian era were blocked by raising of some fortifications with purely military and strategic role – (Marca – *Fortress*, Stîrciu – *Small fortress*, Mirsid – *Poguior* (Mihăilescu 1971), Simleu – *Fortress,* Badacin – *Hemp hill,* Giurtelecul Simleu – *Coasta lui Damian*). Alongside with the military functions, respective fortifications certainly served for supervision over salt transit which affected these regions from prehistorical time.

That was the reason for the likely arising in the upstream and middle stream regions of *the Crasnei* and *Barcaului*, i.e. in *Depresiune Simleu* in the classic Dacian epoch of a tribal unity (this situation is likely and for other groups of the mentioned discoveries), which had the nucleus in the complex of fortifications and sites at *Magura Simleu*, a sharply outlined defensive microsystem, based on 9 fortifications (7 fortresses and two fortified settlements).

ORGANIZATION AND NATURE OF FORTIFICATIONS

Fortified settlements

Having accepted the idea of I. Glodariu, that fortified settlement should be understood as such type of fortification, inside of which either the whole population of the settlement (rare case) or a part of it lives permanently, with the settlement extending beyond the fortified area, we have established the reasons for the inclusion of some or other fortifications to this category. As a rule areas protected by fortifications occupy large surfaces (Annex 2) for to enclose as greater number of houses as possible and consequently greater number of the community members who contributed to the fortification construction.

Minor role in direct supervision and control of the communication routes (commercial, military and strategic), that is pure military significance, constitutes an important concern, which allows to include these sites into the category of fortified settlements, though position of some of them could have had military connotation (position of *Magura Moigrad*, Oarţei de Sus, Simleu Silvania-*Observator*).

Among 10 fortified settlements (37%) mentioned in Annex 1, we can affirm with certitude that only half belongs to this type of settlement. It refers to Pecica-*Santul Mare* (Crişan 1978), Moigrad-*Magura* (Daicoviciu 1937-1940; Ferenczi 1941; Macrea, Rusu 1960; Macrea, Protase, Rusu 1960; Macrea, Rusu, Mitrofan 1962; Matei 1986b; Matei, Stoica 1988; Matei, Pop 1994a; Matei, Pop 1994b; Matei, Pop 1995; Matei, Pop 1996), *Citera,* that of Simleu Silvania from the point *Observator* (Pop 1990; Rusu, Pop, Bejinariu 1995, 39-90; Pop, Bejinariu 1996; Rusu, Pop, Bejinariu 1996) and Tasad (Chidioşan 1979). These have enjoyed ample systematic arheologic research, which confirmed such attribution. Even if Pecica fortification has been only presumed we believe that such a settlement, equal to *Ziridava* significance cannot fail to have defensive elements, which offered protection within an area with such accessible relief making it so

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vulnerable. Other fortified settlements (Berindia, Oarţa de Sus, Paulis, Varadia de Mures, Vladimirescu), for lack of some ample research completely and precisely published cannot constitute the objects of the present discourse.

As regards fortified settlements where information on fortified areas dimensions is available, mainly they constitute large areas destined for numerous communities. Fortified plateau of *Magura Moigrad* has 7 ha (pl. 6), that of *Hill Citera*, also from Moigrad, has 6 ha (pl. 5), though this includes and slopes embraced by fortification. Settlement of Oarţa of Sus has 2,4 ha (pl. 10), that of Simleu-*Observator* 5 ha (pl. 19, 23), Tasad with 2 ha, and that of Vladimirescu one hectare. The only exception is the settlement of Pecica, of only 0,6 ha (pl. 11b).

As regards the internal organization of fortified settlements, it is very difficult to define precisely whether there is a concept of the area systematization and whether it is used with the purpose of justified evaluation of each square meter of the fortified premises. Lack of the exhaustive research and complete publications prevent us from generalizations. It is obvious that internal organization of fortified premises was determined by natural factors (relief, water resources, access roads, construction materials sources, etc.) and anthropogenic factors (demographic, economic, military etc.). Some assertions and those with some extent of certainty can be made only regarding the following archeological sites:

Moigrad: in *Moigrad Magura* there was carried out a systematic archeological research starting in 1938-1939 (Daicoviciu 1937-1940, 323). What is known nowadays very good is the result of 1984, 1987-1995 campaigns[1] which are supplemented, with a probability remark, by those of the years 1958-1959 (Macrea, Rusu 1960; Macrea, Protase, Rusu 1960; Macrea, Rusu, Mitrofan 1962) thanks to the situation in which the archeological material has been collected.

Thus of 70.000 m^2 of the plateau only 3730,35 m^2 have been investigated systematically and it makes only 5,32% of the total. Within this area, there were discovered 193 Dacian graves, 32 dwellings, 43 fire sites, and 8 household furnaces.

For the horizon datable by the second half of the II cen. B.C. - I cen. B.C., which corresponds to the period of the area functioning as the zone of ritual burial there were identified and dated 4 dwellings deepened to which correspond 80 graves. Only one dwelling and 6 graves can be dated back to the threshold between I cen. B.C. - I cen. A.D., but 27 dwellings and 25 graves have been investigated and dated back to the I cen. A.D. it should be mentioned that for the last two horizons there is nothing but overground dwellings as well as places of unknown ritual nature. The rest of graves could not been dated precisely to any horizon due to scant inventory or absence of technical information of the ditch[2].

Sondage research of the plateau at different points has shown that general situation in the settlement is the same at any point, that is less relevant to the middle third which is higher, exposed to winds and where complexes density reduces considerably. Statistic analysis[3] aimed at determination of the complexes overall number on the plateau is possible[4] due to representative number of complexes and sondages in different points. Only those two-thirds of the plateau has been taken into account which have been densely and permanently populated (45.000 m^2).

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Thus for the horizon datable before Christ we have 48 dwellings and 952 graves, this is obvious data for the sacred zone for rituals which contains 1 dwelling per 19,7 graves.

For the intermediary horizon, we have 12 dwellings and 72 graves, but for the third one, to which we consider also belongs that intermediary we have 325 dwellings and 301 graves.

Taking into account the possibility that in a dwelling could generally live a family consisting of 5-6 members (Macrea, Glodariu 1976, 89; Glodariu 1983, 68; Crişan 1989-1993, 87) we can presume a community of 240 people for the first horizon, of 60 for the second and of 1625 for the third[5].

Obviously these estimations seem to be exaggerated, but only for the third horizon (and only if all dwellings are considered to be contemporary, which is impossible) which finishes with the Roman conquest due to which the fortification of the settlement had been provided (Pop 1996a). Essentially, if a dwelling lasted for about a generation (max. cca. 30 years) the values mentioned change because for the first horizon with sacred zone (end of the II cen B.C.- I cen. B.C.) we would have 12 dwellings and 60 dwellers, but for the horizon of the fortified settlement (I cen. A.D.) would be about 110 dwellings and population of 550 dwellers. These values, if applying the coefficient (Crişan 1989-1993, 88) of 1 warrior to 4 community members, it results, for the Dacian fortified settlement at Moigrad-*Magura*, 135 warriors (406 in case all dwellings are contemporary).

At the perimeter of 1 km of the upper plateau of *Magura Moigrad*, which corresponds also to the Dacian circular fortification line, to which is also added semilunar fortification on the north-west slope, i.e. 1,3 km of the defensive elements, there would have been needed an impressive corps of plunderers, if coefficient of one warrior for 3 m of fortification is applied (Crişan 1896, 148; Vasiliev, Aldea, Ciugudean 1991, 156, Crişan 1989-1993, 88). As a result, there would be a necessity of at least 433 warriors. Starting with these data otherwise, multiplying by 4 the number of settlement warriors the first estimation made would be exceeded, that of 1625 and have 1732 of dwellers. Figures could hardly be accepted, but probably the average of the data should be calculated.

What indeed has determined an increase of the population density on the plateau of *Magura* is hard to suppose. Population explosion is excluded. More likely is a migration of a population from the valley to that hill due to the danger aroused in I cen. A.D. At the same time, *Magura Moigrad* could be a fortification where more Dacian communities from the neighborhood sought for refuge.

Pecica: excavations (Crişan 1978) of *Ditch Mare* there has been revealed a single level belonging to the Dacian horizon, which is analyzed here. The level of 0,5-1 m depth suggests intensive habitation for those 100-150 years of the period duration. The habitation density as well as the level depth has been obviously determined by the of the limited area of the tell (0,6 ha). The constructions discovered (workshops, pretentious dwellings, a sanctuary), arheologic inventory, extension of the Dacian settlement beyond the tell gives arguments to the hypothesis according to which within the locality researched by I. H. Crisan there existed an acropolis of the prosperous Dacian dave, maybe even the ancient

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Ziridava. The perimeter of this acropolis could be defended by cca. 100 warriors, this could constitute an index concerning the settlement population of which they originated. This can be at least of 400 dwellers.

Simleu Silvania: at the point *Observator* as a result of archeological research there were discovered 58 Dacian burials used for food storage, household or ritual places, a dwelling with partitions equipped with fireplace and two furnaces, others deepened (totally 9 Dacian dwelling complexes); traces of metallurgic activity (silver, bronze and iron processing); a construction supposed to be attributed sacred character and rich archeological material, which is dated within the period of end of the II. cen. B.C. – beginning of the I cen. A.D. Fortifications of *Observator* seem to function simultaneously, at least those of sectors a, c, d and e. There can be stated even a "specialization" of them. Fortification between sectors a and e, situated at the highest points, protected southwards, eastwards and westwards by accentuated slopes, benefiting also by the circular defensive elements continues to be perceived as having strict military role (being refuge nucleus of the settlement).

From another perspective it is asserted that workshops and certain residual and food storage graves have been grouped at some distance from the dwelling zone, probably that was due to the perils such as fire, used by metal workers, for the civil constructions, as well as their status within community (Eliade 1997, p. 429).

Tasad: excavations carried out within locality have revealed deepened dwellings, dugouts, gold and silver ware workshop, food storage and ritual places and very rich archeological inventory (ceramics, metal objects of: iron, bronze, silver) (Chidioşan 1979). Relatively big area (2 ha) suggests that the density of the Dacian complexes cannot be too high. Until now, excavations have proved this, but due to the lack of more complete data, we cannot take risks to state hypothesis concerning internal organization of the settlement.

Fortresses

Once again taking as a reference material a monographic work by I. Glodariu devoted to the civil and military architecture of Dacians, we will use the term "fortress" to designate those fortifications, permanently inhabited, or not by a garrison, meant for protection of the important access roads within a variable extended zone or supervision (Glodariu 1983, p. 50). These fortifications can constitute an acropolis or military and politic centre of some civil settlements, but obvious military role in the zone imposes inclusion of the category of fortifications into this type. Fortresses represent 63% of total fortifications identified in the west and north-west of Romania.

The importance of those seven fortresses from the territory of *Depresiune Simleu* has been mentioned in some lines (Glodariu 1982, 33; Glodariu 1983, 154; Matei 1979), obviously the facts known for that date has been taken into consideration[6]. Even if the precision of their character have not always been exact and correct[7] their presence has been indisputably related to commercial routes.

As it can be seen from pl. 1, seven of those 17 fortifications-fortresses within the area in question are situated in the northern half, more precisely in *Depresiune Simleu*. High density of the Dacian epoch discoveries in *Depresiune Simleu* can be explained by the existence of the powerful tribal union in the basins of upper and

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middle current of rivers *Crasna* and *Barcau*. Discoveries with defensive character gravitate towards imposing *Depresiune of Simleu* thus providing protection mainly of the west, south and east sectors. In the north, though there have been carried out numerous archeological research of the terrain, till now no Dacian fortifications have been identified but only a fortified point, a fortress with strict military functions at Giurtelecul Simleu. It should be supposed that due to the natural uneven impeding and lengthy access northwards the plateaus of *Observator*, building of more ample defensive construction in this sector had been renounced.

As it can be seen in Annex 2, fortresses occupies less space, is easier to be defended by small number of warriors. In general the fortresses area has the values of 0,14 and 0,9 ha (Badacin, Cladova, Giurtelecu Simleu, Marca, Mesesenii de Sus, Petrani, Sacalasau Nou, Savârsin, Stârciu). Only fortresses of Clit and Mirsid (0,06 ha) are smaller, but that of Simleu Silvania-*Fortress*, which exceeds much the average established (cca. 3 ha) constitutes an aristocratic residence, an *acropolis,* fortification protecting in this case the superior mound inhabited by the Dacians.

Marca: double concentric circumvolution closes an oval area with diameters of 100×40 m (pl. 3) in which a big wooden construction with luted walls has been identified, probably a garrison barrack (Dumitraşcu, Lucăcel 1974, 9-10), with precision that this has as well an older no conflagration phase[8]. Archeological research carried out in the year 1972 (Dumitraşcu, Lucăcel 1974) has not solved either problems related to absolute and relative chronology of the site, or those concerning defensive elements or interior dwelling complexes[9]. No estimation can be made regarding this due to the absence of data. The only suggestions, which can be made, are those regarding the fortification garrison. For those two premises the perimeter of which exceeds 460 m there was a necessity of a minimum garrison of 153 warriors. Archeological inventory discovered by the excavations of 1972 suggests constant and dense human presence related to the everyday needs of the permanent garrison of the premises (Pop 1995a, 74). It is very likely that these warriors have been accompanied at least a part of them by their families. It is probably the settlement, which supplied men of the garrison with food that has been discovered on the left terrain of the river Barcau[10] at cca. 2 km up-stream from *Fortress*.

Simleu Silvania: complexes-dwellings (15) and household annexes (sheds, 39 food storage burials or ritual places, firesides, furnaces) completes the landscape of the discoveries of the acropolis at the hill *Fortress*. Inventory of these complexes is especially rich and diversified. Alongside with impressive quantity of hand-made or the potter's wheel made ceramics we come across iron parts used in construction, iron, stone or ivory instruments and utensils, arms and elements of military equipment from iron, bronze or stone, silver, bronze, iron or glass knick-knackery, coins.

Traces of iron or bronze processing confirms special economic activity, also reasoned by Greek, Roman or Dacian coins discovered. This suggests the existence of economic exchange in that period between Dacians and neighboring Greek, Roman and Celts people. The importance of the archeological complex at the hill *Fortress* is also stressed by the discovery in the years 1994, 1995 and 1997 of a

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workshop of fine replicated products – Roman Republic dinars (Alfoldi 1974; Gilles 1983; Gunter 1983) of precious metal (silver) by means of molding (Pop, Bejinariu 1995a, pl. 16).

This example proves the existence of the systematization concept of the abovementioned complexes, which aimed at reasoned usage of the fortified area and creation of the best living conditions in peace or wartime.

Thus, there has been observed a succession of the seven constructions of the same terrain with the aim to use each square meter of the build area with maximum efficiency (Pop 1999).

In the same point, on connecting way, beyond the protection barrages there was established a group of complexes from both parts of the highest zone of the way which had been probably used as well as an access road from the exterior towards superior mound where probably was the local aristocracy location. To the number of complexes discovered and reported investigated space (1051 sq.m) with the site area of cca. 2 ha and to the chronologic interval end of the II cen. B.C. – beg. of the II cen. A.D. can correspond population of 305 permanently lived dwellers. They could support 76 warriors, though this number should have been much more due to the possibility to recruit them from the big civil settlement at the bottom of the hill (Pop 1990; Pop 1992). To the perimeter of this acropolis (cca. 310 m) the necessary number of defendants should have been about 103 warriors.

Concerning the length of the discovered fortification elements, applying the same coefficient of one warrior for 3 m of palisade (Crişan 1896, 148; Vasiliev, Aldea, Ciugudean 1991, 156, Crişan 1989-1993, 88), we can suppose for the I phase (pl.17) a number of cca. 30 warriors, as well as for the III phase (pl.17). for the intermediary one (pl.16) the number was significantly greater (to a perimeter of 230 m at least 80 warriors, without taking into account the possibility of existence of a palisade even at the top leveled down at least four times in the Middle Ages), though fortified area had been more limited the presumable military character is visible.

Statute and functioning

Another possibility to characterize fortifications in question can start from the perspective of role and position which they have for civil settlements of the zone.

To the extent of the sufficient information available for these fortifications, we can therefore identify *acropolis*, i.e. location of the aristocracy (secular and/or ecclesiastical) and consequently *fortified settlements* and *fortresses* for those not acquiring new valences in the function of the offered criterion.

The term used for the settlements of Simleu Silvania-*Fortress* and *Observator* and others presented in Annex 1 (those 12 examples make 44,5% of 27 presented fortifications) cover those fortifications, which were constructed near one or more open settlements, not being lived in permanently by the settlements population, but only by the political and military leader, together with garrison variable in size. Acropolis fortification constitutes at the same time a place where had been organized, in case of attack, resistance of the warriors recruited from one or more settlements[11]. It could not accommodate even in difficult times all the population of the settlements or their property, but had more pretentious constructions, designed for secular or ecclesiastical aristocracy, different specialized workshops (metallurgic, gold and silver ware, pottery, etc.).

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Category of *refuge fortifications*, exemplified by a single case, that of Moigrad - *Citera* (pl. 5), can be identified with an acropolis if taking into account sporadic inhabitance, revealed only in the highest sector of the fortified premise. This can be the local secular aristocracy settlement during the time when in this chronologic horizon (end of the II cen.B.C. – beg. of the I cen. B.C.) on the neighboring hill, *Magura Moigrad*, exists a zone of ritual places overall the hill and probably local ecclesiastic aristocracy location (Matei, Pop 2001).

Fortified settlements offer a possibility of identification of some of them with veritable local aristocracy settlements. Berindia, Pecica (pl. 11b), Tasad, Varadia of Mures and Vladimirescu, which develop in their exterior settlements which can constitute cases of social and religious division and not only military and geomorphologic. The presence of the sanctuary in the centre of plateau *Ditch Mare* - Pecica (pl. 11b) (Crişan 1966, Crişan 1978), which anyway has a relatively small space for a fortified settlement, is an argument in favor of such attribution.

Fortresses, in their turn, in some cases also have the statute of acropolis, being constructed at the place of or within settlements, which they serve for (case of Cladova - pl. 2, Savârsin, Simleu-*Fortress* - pl. 18), even if there appear settlements with the same function (case of Badacin, Stârciu - pl. 14). This statement is difficult to prove having no sufficient data.

FORTIFICATIONS TYPES – by constituent elements[12]

Fortifications of barrage-type promontory (16 cases 53%)

Fortifications of single barrage-type promontory

Almost all fortifications in question were situated on geologic formations, which allowed only one-way access. They always functioned to block this access road, as a rule in the densest sector, to avoid great efforts in work, but especially for creating minimal front for defense and living, that is a small but efficient number of defenders. We consider that additional fortification of the rest of the perimeter of the chosen area had been practiced, though sometimes natural erosion of the slopes, as well as anthropogenic factors, have contributed to the phenomena of possible traces disappearance. Fortifications of single barrage-type promontory (those 13 examples represent 43% of total 30 cases of identified fortifications) are those of Clit, Giurtelecul Simleu, Mesesenii of Sus, Moigrad-*Magura* (only semilunar ditch of 235 m length of the north-west side, pl. 6, 9b), Pecica, Petrani, Sacalasau Nou (pl. 13), Savârsin, Simleu-*Fortress* (phases I and III, pl. 17, 18), Simleu-*Observator* (sectors b,c,d from pl. 19 and 23, profiles from pl. 20b, 20c, pl. 22), Soimi, Susturogi, Tasad.

Fortifications of double barrage-type promontory

A series of fortifications of barrage-type promontory represents double blocks built due to the existence of two access roads towards space protected by the defensive elements. This reality being supported by different reasons (safety offered by the place, strategic position, and even multiple accesses etc.) conditioned a supplement (at least doubling) to the constructive effort and at the same time number of warriors necessary for fortification defense.

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To this morphologic type, we can include with certitude only three cases (which represent 11% of those 30 identified) and namely: Badacin, Oarţa of Sus (pl. 10) and Stârciu (pl.14).

Fortifications of circular type

In seven identified cases, (23%) we ascertain the circular fortification type. They are Cladova (pl. 2), Marca (pl. 3), Mirsid, Moigrad-*Citera* (pl. 5) and *Magura* (edge of plateau, pl. 6), Simleu Silvania-*Fortress* (phase II, pl. 15,16), *Observator* (superior sector a, e from pl. 19, 23 and profiles 20a, 21). In some cases, we ascertain the presence of double concentric circumvolutions (Marca, pl. 3, Mirsid, maybe Simleu-*Fortress,* pl. 18, phase II). Due to geomorphologic emplacement two of this fortifications are of the similar barrage type promontory (Marca pl. 3, Simleu Silvania-*Observator,* sector a, e), that is why, though circular, they separate a sector of morphologic units where they were arranged. In addition, those, which have linear or semicircular defensive type (those of Simleu, Moigrad - Magura), have been included to the proposed types.

In seven cases (23 %), due to the summary information, there could not be established precisely the type of fortification as disposed of function (Berindia, Boftei, Groseni, Paulis, Soimos, Varadia de Mures, Vladimirescu).

FORTIFICATIONS TYPES – by fortifying elements

Fortifications with ditch and palisade

This constructive type of fortification appears in the reduced number of situations and namely at Badacin, Giurtelecu Simleu, Moigrad-*Citera*, Pecica (15%). If in case of Pecica the ditch had not been dug making advantage of natural conditions, supposing that palisade had been situated at the plateau edge of the tell, in others the ditch had been evidently excavated by human hand. At Badacin they preferred to dig a ditch in the hill's slope, at the optimal distance from the edge of the plateau, excavated soil being probably used to build the ditch bank. Barrage was a result of the hill's slope curve. Similar situation could be at Moigrad *Magura*, in the sector of semilunar ditch of 235 m arranged in the hill's slope (pl. 6, 9b). Stone excavated on ditch digging was used to build its bank (as in other cases: Giurtelec, Marca, Moigrad-*Citera*, Simleu-*Fortress*, phase II and *Observator*, sector c, pl. 20c), but the barrage was build from the soil brought from the superior slope, i.e. from the fortification interior. Due to the accentuated slope, the barrage slipped in the course of time into the ditch, which nowadays looks like a veritable terrace (Marca[13] pl.3, 4, Moigrad-*Citera*[14] pl. 9b).

Fortifications with ditch, barrage and palisade

Though representing majority in number (14 cases-51%) some of the fortifications included into this category present only some probability due to lacunae concerning constructions system, due to brief summarizing and superficial publications, impossibility of carrying out a pertinent observation regarding objects affected by the posterior arrangements (Cladova, Clit, Sacalasau), or lack of systematic archeological research (Meseseni, Petrani, Savârsin, Stârciu, Tasad).

Among those known, there can be met simple defensive constructions of palisade type made of one single wooden wall (Marca pl. 4, Simleu-*Fortress*, phase II pl. 16, *Observator*, sector a, pl. 20a).

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Complex palisades, i.e. wooden and soil walls are the most frequent constructions as due to their presupposed military advantages (height, solidity, durability, imposing image, etc.) so to the needs of being used in absence of stone defensive constructions, and abundant availability of wood, soil in the zone of hills with accentuated slopes, easily defended.

Thus of constructions discovered at Marca (in the zone of access road only, pl. 3, 4), Moigrad-*Magura* (almost at the overall perimeter of the superior plateau, pl.6-9), Simleu Silvania-*Fortress* (phases I and III, pl. 17, 18), *Observator* (sector c, d, e, pl. 20c, 21, 22, 23), being made of two interconnected palisades with logs, having as consolidation local soil and stone (Marca?, Moigrad, Simleu-Fortress phase III and Observator, sector c, d1, e) or more such walls (Simleu- *Observator*, sector d2-three walls, Simleu-*Fortress*, phase I-5 walls).

Ditches dug in front of these wooden and rocky soil walls have variable dimensions, sometimes modest (entrance 1,5m, depth cca. 1 m), sometimes common for the Dacian fortifications of that time (entrance 3-3,5 m, depth 1-1,5 m) obviously these are present-day data, not those from antiquity. As it has been seen, it was rare case when soil and stone excavated on ditch digging were used to build barrage, which has been made superficially, of the materials from the fortification interior. Ditch digging had been carried out for military reasons, defensive, with the purpose to increase the palisade height, to reduce besiegers' mobility as well as to gather battle equipment used in conflict, which was used afterwards. Otherwise, it is very difficult to explain the presence of ditches at such accentuated slopes as those of the hills where the Dacian fortifications had been built.

In general, the level difference of the barrage, that is at the back of the palisade and the ditch bottom is now from 2-3 m to 7-8 m. We consider that to provide protection of the defenders this distance should be of at least 3,5 m. there had not been revealed lute revetment of wooden structures of fortifications, but revetment with water- imbibing materials (textile, leather) had been hardly practiced. Soil, burnt wood and ashes revealed at some fortifications (Marca, Clit, Giurtelec, Moigrad-*Magura,* Stârciu, Simleu) obviously originate from palisades conflagrations, not being intentional actions carried out in the course of their building. The presence of such traces in the barrages of some fortifications (Marca, pl. 4) can be eventually elements originating from the previous phase of fortification.

CHRONOLOGY, HISTORIC CONCLUSIONS

On the map of plate 1 we can assert existence of three big conglomerates of Dacian settlements and fortifications, placed within big geographic units in the western and north-western zone of Romania (pl. 1).

The first group is observed in the basin of the *Mures*, northwards of the river, where we assert the presence of at least three fortresses, four fortified settlements and 15 non-fortified settlements. Explanation of such density lies in special importance of the *Mures* as both commercial route and access road towards and outwards *Transilvania*. Another reason is also and fertility of the river flood-lands.

The second conglomerate of fortifications and settlements is situated on the *Crisul Alb, Crisul Negru* and *Crisul Repede* and their affluents. In this case, we

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have three fortresses and a fortified settlement near only 5 non-fortified settlements. On the *Crisul Negru* we ascertain the presence of only two fortresses. Obviously explanation of this penury is related to the research stage of the zone. In the basin of the *Crisul Repede* there were identified only two fortresses, a fortified settlement and 12 non-fortified settlements, of which two in caves. On the *Crisuri* there were identified totally 2 fortified settlements, 17 non-fortified and 7 fortresses. Though the research stage of the zone from the point o view of archeological prospecting is far from being finished we still observe the importance of fortifications emplacement in this sector of access towards auriferous zone of the *Apuseni Mountains*, as well as access towards *Transilvania* by the *Crisul Repede*.

Following the map of the pre-roman Dacia with fortifications widely distributed on the territory, map offered by professor I. Glodariu in the study regarding *Dacian Defensive System* (Glodariu 1982, 23-38), asserts the existence in the intracarpathian arch of three big conglomerates of Dacian fortifications, one being situated in the north-western part of Dacia, *Depresiune Simleu,* that being the third group of Dacian fortifications in the west and north-west of Romania.

It is known, mostly due to fortifications that this sector constitutes one of the principal access roads inwards Transilvania from the north-west. Obligatory passage place of *Poarta Mesesana* (Mihăilescu 1971, 9-14) (pl. 1), situated in immediate proximity to ancient Porolissum, is bordered westwards by *Depresiune Simleu* which includes majority of the fortified points mentioned above.

Entrance to this ravine from the west, as it occupies the western half of present day region *Salaj*, could be done only through the valley *Barcaului* guarded by the strict military fortification at Marca (pl. 3, 4). Northwards access was available only through the valley *Crasnei* bending from the west the hill complex of *Magura Simleu*, where access had been barred by the fortification of Giurtelec, as well as those of Simleu Silvania (pl. 15-23). Southwards, i.e. on passing the *Mountains Meses* from the direction of the valley basin of the *Agrij* there was an access by Mesesenii de Sus and Stârciu (pl. 14) where it was also supervised by the Dacian fortifications with strict military role.

Also this ensemble of fortifications, which accumulated around *Depresiune Simleu*, in the centre of which there had been situated the complex of settlements and fortifications on the imposing *Magura Simleu*, and it is outlined as the ample fortified living area and with the purpose of blocking the principal north-west access roads towards center of Dacia, which is passing *Poarta Mesesana* created by high hills of *Magura Moigrad*, *Pomet* and *Citera* and of the *Ortelec* valley along which there had stretched the ancient road.

Existence in the west and north-west of such main bodies of fortifications raises many questions of chronologic nature concerning great time interval established for some of them: the second half of the II cen. B.C. – beginning of the II cen. A.D. (Dumitraşcu, Lucăcel 1974, 26-27, Glodariu 1983).

According to the opinion of I. Glodariu, the interval Burebista - Decebal, is marked by more or less simultaneous construction of the majority of fortifications in Dacia in less than two centuries (Glodariu 1982, 30). What namely had determined this can be seen in the context of expansion of both the Dacian reign and in particular the Roman Empire (Glodariu 2001, 731-737).

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The emplacement of fortifications in the north and west of the Mountains Apuseni constitutes a unified defensive system, interconnected and coherent, delimiting in this sector the authority of the Dacian reign, even if it could have been carried out at variable distance along the concrete line of fortifications (Glodariu 2000, 290). Such zone is mentioned as one of the most rich the Dacian discoveries both of coins (Glodariu 1974, map of the la pl. XIV) and embellishments thesauri.

Attentive concern of the mentioned sites chronology can lead to conclusions of incontestable historic and archeological nature.

It can not be peremptory demonstrated, that some of fortifications in question had also functioned and in the II cen. B.C. (we mean Boftei, Groseni, Mirsid, Paulis, Petrani, Sacalasau, Savârsin, Stârciu, Soimi, Soimos, Susturogi, Vladimirescu), because the cessation of some of them can not be caused by daco-romian wars at the beginning of the II cen. A.D. (Berindia, Boftei, Cladova, Clit, Giurtelec, Groseni, Meseseni, Mirsid, Moigrad-*Citera,* Oarţa de Sus, Paulis, Petrani, Sacalasau, Savârsin, Simleu-*Observator*, Soimi, Soimos, Susturogi, Tasad, Varadia, Vladimirescu). Materials discovered can suggest if not a fortification of some of them, then anyway a settlement in the II cen. B.C., though geographic position rather presupposes the locality fortification.

For the reasons pointed in the text, it is very difficult to establish chronologic limits of each fortification taken separately.

Lacunae regarding concrete data of archeological dig, brief summary and incomplete publications, make us suppose the chronologic interval of functioning of Berindia, Boftei, Cladova, Clit, Groseni, Mirsid, Paulis, Petrani, Sacalasau, Savârsin, Soimi, Soimos, Susturogi, Tasad, Varadia, Vladimirescu fortifications.

Lack of systematic archeological research constitutes objective reason, which does not allow us to date with certitude some fortifications as those of Badacin, Boftei, Groseni, Paulis, Petrani, Stârciu, Soimi, Soimos.

Access to materials discovered in archaeological prospecting or small sondages or systematic digs still makes it possible to date some fortifications (Badacin, Giurtelec, Marca, Meseseni, Moigrad, Oarţa de Sus, Stârciu, Simleu), within proposed interval basing on chronology established for the settlements Moigrad-*Magura* (Matei, Pop 2001) and Simleu Silvania.

In case of Simleu it was possible to document with certitude fortification of sites *Fortress* and *Observator* dating back prior or within Burebista time. It is possible that large-scale arrangement of the I cen. A.D. (more probable the second half as in case with *Magura Moigrad*) had destroyed the traces of some older fortifications connected with old political unities before Burebista or in his reign (Glodariu 2001, 731), also bound with commercial routes supervision which due to coin circulation brought substantial income to the local aristocracy.

The events of the second half of the I cen. A.D., before dacian-romanian confrontation, should be considered within the framework of the historic reality of that time, realm limitation and necessity of undertaking of the military function of borders control by other points, with garrisons variable in size, but permanent as to their location (we mean intensive living in fortifications) we assured by blockage, supervision, control all possible access roads towards the heart of the Dacian realm (Glodariu, 1982, 33).

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If in general, for the entire established chronologic interval, *Magura Simleu* constitutes nucleus and "command centre" of the Dacian power in *Depresiune Simleu* and implicitly northwestwards of Dacia it is of interest to follow its evolution in those 200 years prior to the Roman Conquest. A considerable change regarding military tactics and strategy, as well as habitation has been established at Simleu Silvania, *Magura,* at the moment when there had been revealed total and definite abandonment of the fortified settlement, which functioned within the interval of the end of the II-I cen. B.C. in the point *Observator*, to the maximum (597 m) - *Magura Simleu.* It seems that its function had been taken by the acropolis of the point *Fortress*, situated at the inferior altitude (372 m). it is difficult to explain this change of function in conditions when we can not document massive violent destruction of fortifications of *Observator.* Decrease in water supply sources, immobility due to isolation or rather impossibility to supervise from afar and efficiently strategic and commercial routes could cause the phenomenon of abandonment mentioned above. Renunciation of the big fortified settlement of type *dava* and assumption of military function by smaller fortifications, provided with permanent garrisons, variable in size, but placed in the key transit points, can be another reason of abandonment of the fortification of cca.5 ha at *Observator.* Simultaneously with this abandonment, we ascertain that small fortifications of Giurtelec closely connected with the settlement at Simleu-*Observator* had ceased functioning. It is the moment when the phase of massive conflagration, which astonished the local acropolis dwellers in the point *Fortress* also at Simleu had been ascertained (Pop 1999, 118).

Geo-strategic importance of the zone, situated in the northwestern periphery of Decebal realm, had made *Depresiune Simleu* both a chain link of the contact zone with Celtic world and well-fortified outpost destined to defend, control and supervise the principal entrance route of to Transilvania from the north-west: *Poarta Mesesana.*

A unity within the framework of the Dacian defensive microsystem, reflected in military architecture of *Depresiune Simleu,* constitute only one of the expressions of the Dacian material and spiritual unities manifested in the course of the last two centuries which precede the Roman Conquest, which stimulates the outburst of the civilization not encountered before in the autochthony.

Another factor, completely neglected, which determines a change in the choice regarding military strategy and tactics of the Dacians in the north-west, is foundation of *Pannonia* (Dumitraşcu 1993, 68-70) and settlement of Sarmats iazygi tribe between the *Dunare* and the *Tisa*, and in the north of the *Mures* position (Dumitraşcu 1993, 72-76). Their emplacement at the source of the *Tisa* river towards the basin of the *Crisuri*, even in the I cen. A.D., was not possible due to the existence of some Dacian fortifications capable to stop this phenomena. Concentrated Dacian fortifications at *Depresiune Simleu* as well as approach to the fortresses westwards of *Carpaţii Apuseni* and fortifications of *Valea Mures* (probably those of the medium stream of the *Mures* not those mentioned here!) could exercise power with certainty only in the zone undulating foothills of these mountains, delimiting the Dacian realm in the west (Dumitraşcu 1971b, 1972a;

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Glodariu 2000). The absence of truly Dacian fortifications in the valley of *Mures* earlier dated with certitude to the I cen. A.D. (pl. 1) becomes a new reality. We are not sure whether the moment of Pannonia province foundation had not coincided with the posterior disappearance of some Dacian fortifications and settlements of the valley *Mures* and the west of Dacia. While analyzing in 1964 relations between the Dacians and Romans E. Chirila reconsiders expedition of M. VINICIVS in the years 10-9 B.C. as an answer to Dacian invasion in Pannonia in winter of the year 10 B.C. (Chirilă 1964) Probably this is the moment when fortifications of Berindia (Dumitraşcu, Ordentlich 1973, 70-71), Cladova, Clit, Pecica, Savârsin, Soimos, Varadia cease to exist.

On accepting the fact that at that date almost all Dacian fortifications discussed here had functioned (except *Magura Moigrad* and probably Badacin) we can try to estimate the number of warriors placed within palisades using the same coefficient of one warrior per 3 m of the defensive element (Annex 2). Thus, extrapolating calculation for those 19 fortifications where we have information reveal fortified areas of cca. 1,7 ha/fortification (total for all those 27 is 50 ha). To the total of 7356 m of fortifications perimeter there was a necessity in 2452 defenders, that is an average of 136 warriors/fortification. Generalization regarding other 27 fortifications results in the number of 3672 warriors. Taking into account the necessity for reserves and those having other function within fortification, the number is at least tripled and amounts not less than 11.000.

If indeed in the Roman Conquest time at the beg. of the II cen. A.D. only about half of the Dacian fortifications functioned, the number of 11.000 should be cut by half resulting thus in the military corps of 5.500 warriors for the zone of the *Crisuri* and *Depresiune Simleu*, a negligible force in conditions of permanent garrisons conducted by commanders nominated by the king (Glodariu 2000, 291), these men were capable professional warriors (both logistically and physically) (Glodariu 2000, 292) to defeat any Roman enemy. Daco-iazig conflict can serve as an example where Decebal wins.

As regards chronologic analyzes fortifications of the *Crisuri* and *Depresiune Simleu* can rediscuta incident mentioned by Dio Cassius which states that between the two wars Decebal had conquered the Iazigi territory, which Traian, having conquered it in 106 A.D. refused to return to them. Obviously if speaking of Iazigi, at that date on the territory in dispute they should be searched for in the west of *Roman Dacia*. Arguments given regarding this by C. Opreanu (Opreanu, 1997) are perfectly valuable with exception that we do not consider obvious for a personality as Decebal to insist, as it is affirmed, to re-conquest the entire territory from the *Tisa* to the *Carpaţii Apuseni*, with indisputable military and strategic importance (Opreanu 1998, p. 47-51). Only realization of thorough observations while researching fortifications of the zone, as well as attentive analyses of the dating elements could bring supplementary arguments concerning above-mentioned affirmations.

We consider more plausible the Roman Conquest of *Depresiune Simleu* and *Crisul Repede* zone by Traian, territories situated at the western periphery of the Dacian realm, this statute imposes also border determination of the Traian province at the western limits of this zone. The most likely direction of these lines initially can be offered by the barrage line registered at the beginning of the XIX century,

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barrage which starts at Beltiug (reg. Satu Mare) sud-westwards including the valley of the *Crasna*, *Barcau* and *Crisul Repede* in Oradea. Traces of the Roman presence in this territory had been revealed and we think will continue to appear, but their abandonment at Hadrian suggests that they should not be overestimated[15].

The Iazigi action certainly had been initially supported by Romans with the aim to make the north-western access to Dacia easier, as far as the Mures valley gradually was becoming Roman. Sarmaţs Iazigi tribe had created probably such a pressing in the north-west of Dacia that it is easy to explain the presence of the Dacian population so numerous in *Magura Moigrad* and in particular its fortification (Matei, Pop 2001, 262-265.)[16] with the aim to protect the dwellers, but rather the entrance route to the heart of the realm. Presence of archeological material of Przeworsk, though insufficient (Crişan 1969, pl. LXXVI/6), on the I cen. A.D. complexes also explain the case of *Magura Moigrad*, considering in the bearers of this culture mixed with the Burii aliens of Decebal and frightened of Iazigi.

North-western zone of present day Romania had been profoundly integrated under Decebal reign (Glodariu 1982, 33), into a well organized and coherent defensive system only because of the strategic importance of the place mentioned at the beginning, importance shown as by geographic emplacement of the points, so by the discoveries density in all sequences of the Dacian civilization before the Roman conquest.

NOTES:

1. Collective coordinated by Al.V.Matei with participation of C. Stoica, D. Tamba, H. Pop, I. Bejinariu.
2. The case of 55 graves discovered in years 1958-59.
3. Similar data can be seen in Crişan 1989-1993.
4. See the first try in Pop 1995b.
5. The minimum of five members has been taken for calculation.
6. It is said about Marca-*Cetate*, Stârciu-*Cetăţuie*, Şimleu Silvaniei-*Cetate*, Tusa-*La Şanţuri* (sondages carried out recently in the year 1995 by H. Pop and I. Bejinariu showed that at Tusa we have to deal with a medieval fortification).
7. Archeological prospecting 8.02.1998.
8. Recent non-authorized prospections have allowed to make some remarks regarding this.
9. Inauthorized prospecting has practically eliminated possibility to undertake archeological dig with the aim to establish the site chronology.
10. Archeological prospecting H. Pop, February 2001.
11. Glodariu 1983, p. 50 opts for the term fortress. We used term ***acropolis*** considering it more suitable for the given cases.
12. The preference is given to typology carried out by I. Glodariu, valuable for the Dacian fortifications in the west and north-west of Romania (Glodariu 1983).
13. Dumitraşcu, Lucăcel 1974, p. 9, 12, says about terraces instead of ditches positioned at the basis of barrages.
14. Maybe also due to the usage by Romans and later by Romans of a part of the ditch as a road, this fact helped to accentuated ditch silting. We do not exclude large-scale leveling of the zone by the Romans.
15. Recent digs by Al.V. Matei, R. Gindele. See Gindele 2001, Gindele, Matei 2002.
16. Măgura fortification ii can be dated with certitude to the end of the I cen A.D. because presupposes complexes of this horizon.

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Annex1

STATISTIC TABLE REGARDING DACIAN FORTIFICATIONS IN THE WEST AND NORTH –WEST OF ROMANIA

1	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17
1.	Badacin	Hill Hemp			a		*			*					
2.	Berindia	Sindrioara		a					*			*			?
3.	Botfei	Small fortress Înalta			c				*			*	?	?	?
4.	Cladova	Hill Carierei			a			*			*				?
5.	Clit	Gureţul Negrilor			c	*					*				?
6.	Giurtelecu Simleu	Coasta lui Damian			c	*				*					
7.	Groseni	Jidovina			c				*			*	?	?	?
8.	Marca	Fortress			c			*			*				
9.	Mesesenii of Sus	Osoiu Macaului			c	*					*				
10.	Mirsid	Poguior			c			*				*			?
11.	Moigrad	Citera	a					*		*					
12.	Moigrad	Magura		af		*		*			*				
13.	Oarţa of Sus	Magura		af			*				*				
14.	Paulis	Hill Batrân		af					*			*	?	?	?
15.	Pecica	Ditch Mare		a		*				*					
16.	Petrani	Piatra Petranilor			c	*					*			?	?
17.	Sacalasau Nou	Hill with Bani			c	*					*				
18.	Savârsin	Hill Fortress			a	*					*				
19.	Stârciu	Cetaţuie			a		*				*				
20.	Simleu Silvania	Fortress -Varhegy			a	*		*			*				

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21.	Simleu Silvania	Observator		a		*		*			*				
22.	Soimi	Fortress			c	*						*		?	?
23.	Soimos	Fortress			c				*			*		?	?
24.	Susturogi	Fortress			c	*					*				
25.	Tasad	Small fortress		a		*					*				?
26.	Varadia of Mures	Fortress		a					*			*			
27.	Vladimirescu	Fortress		a					*			*			?
	TOTAL		1	9	17	13	3	7	7	4	14	9			
	TOTAL %		4	33	63	43	11	23	23	15	51	34			

1. terrain number
2. locality
3. point
4. refuge fortification
5. fortified settlement
6. fortress
7. unspecified
8. fortification with single promontory barrage
9. fortification with double promontory barrage
10. circular fortification
11. unspecified
12. fortification with ditch and palisade
13. fortification with ditch, barrage and palisade
14. unspecified
15. end of the II. cen. B.C.
16. I cen. B.C.
17. I cen.A.D.

a. acropolis
c. fortress
af. fortified settlement

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Annex2

STATISTIC TABLE REGARDING DACIAN FORTIFICATIONS IN THE WEST AND NORTH –WEST OF ROMANIA

1	2	3	4	5	6	7	8	9	10	11	12
1.	Badacin	Hill Hemp			*	0,3	225/75	70/23			
2.	Berindia	Sindrioara		*							?
3.	Botfei	Small fortress Înalta			*				?	?	?
4.	Cladova	Hill Carierei			*	0.9	375/125	375/125			?
5.	Clit	Gureţul Negrilor			*	0.06	110/36	10/4			?
6.	Giurtelecu Simleu	Coasta lui Damian			*	0,14	145/48	10/4			
7.	Groseni	Jidovina			*				?	?	?
8.	Marca	Fortress			*	0,3	460/153	460/153			
9.	Mesesenii of Sus	Osoiu Macaului			*	0,6	360/120	7/3			
10.	Mirsid	Poguior			*	0.06	90/30	90/30			?
11.	Moigrad	Citera	*			6	1000/333	1000/333			
12.		Magura		*		7	1300/433	1300/433			
13.	Oarţa of Sus	Magura		*		2,4	650/216	270/90			
14.	Paulis	Hill Batrân		*					?	?	?
15.	Pecica	Ditch Mare		*		0,6	300/100	300/100			
16.	Petrani	Petrani Stone			*	0,7	314/104	190/63		?	?
17.	Sacalasau Nou	Hill with Bani			*	0,6	300/100	20/7			
18.	Savârsin	Hill Fortress			*	0,9	450/150	450/150			
19.	Stârciu	Small fortress			*	0,3	100/33	100/33			
20.	Simleu Silvania	Fortress -Varhegy			*	3	310/103	310/103			
21.		Observator		*		5	550/183	550/183			
22.	Soimi	Fortress			*					?	?
23.	Soimos	Fortress			*					?	?
24.	Susturogi	Fortress			*						
25.	Tasad	Small fortress		*		2					?
26.	Varadia of Mures	Fortress		*							
27.	Vladimirescu	Fortress		*		1	330/110	330/110			?
	TOTAL		1	9	17	32,5 ha	7356/2452	5841/1947	18	25	14
	TOTAL %		4	33	63	1,7 ha	136/18 fort.	108/18 fort.			

1. terrain number; 2. locality; 3. point; 4. refuge fortification; 5. fortified settlement; 6. fortress; 7. area; 8. perimeter (m)/ number of warriors; 9. length of the fortification elements (m)/number warriors; 10. end of II cen. B.C.; 11. I cen. B.C.; 12. I cen. A.D.- beg of II cen. A.D.

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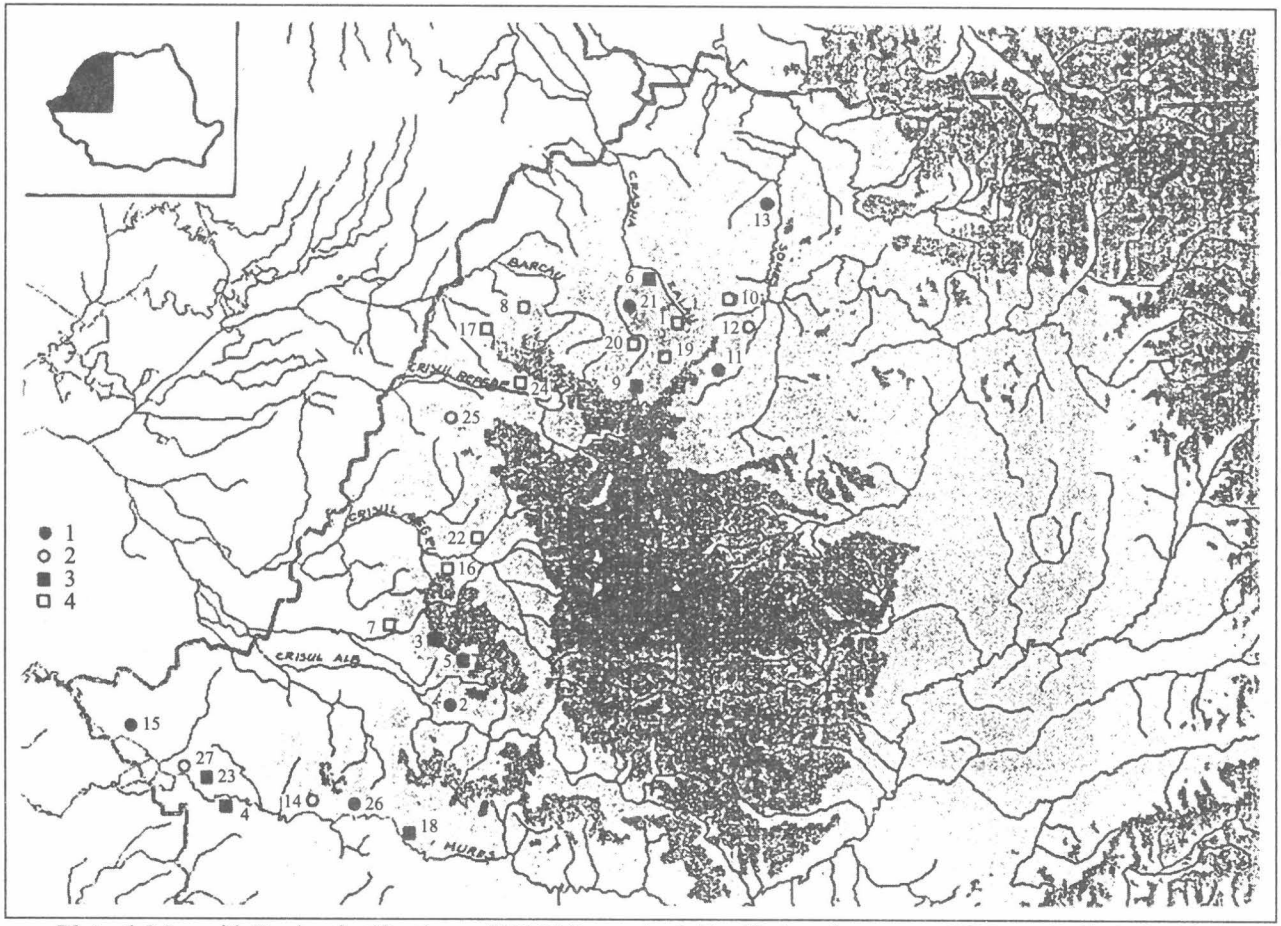

Plate. 1. Map with Dacian fortifications of V-NV Romania. 1. Fortified settlements end II-I cen. B.C.; 2. fortified settlements I cen.A.D.; 3. Fortresses end II-I cen.B.C.; 4. Fortresses I cen. A.D. Numbers correspond to those from text.

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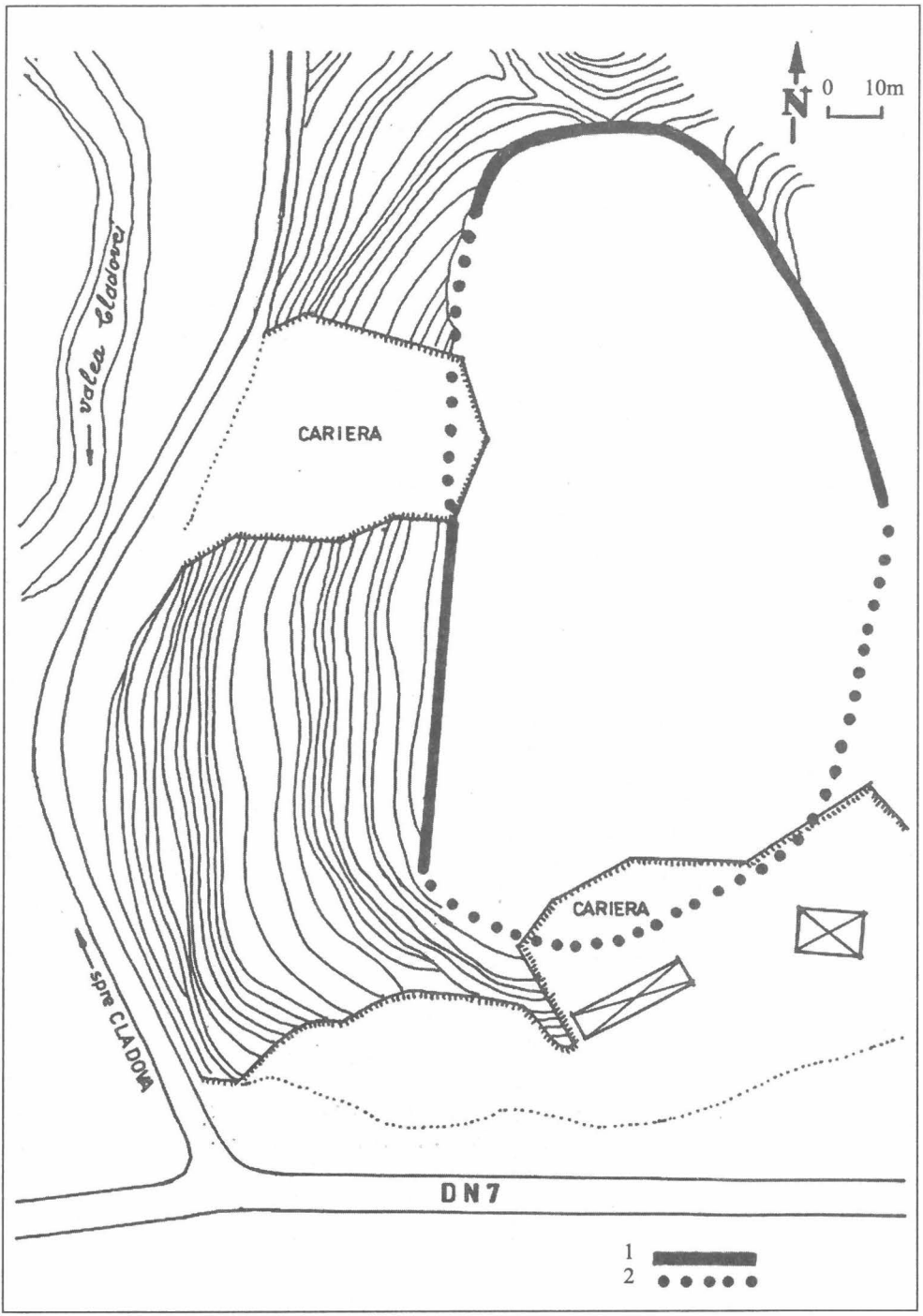

Plate. 2. Cladova, Hill Carierei. Plan of Dacian fortification (after V. Boroneanț). C- modern quarry, 1. barrage of existent soil; 2. barrage of presumed soil.

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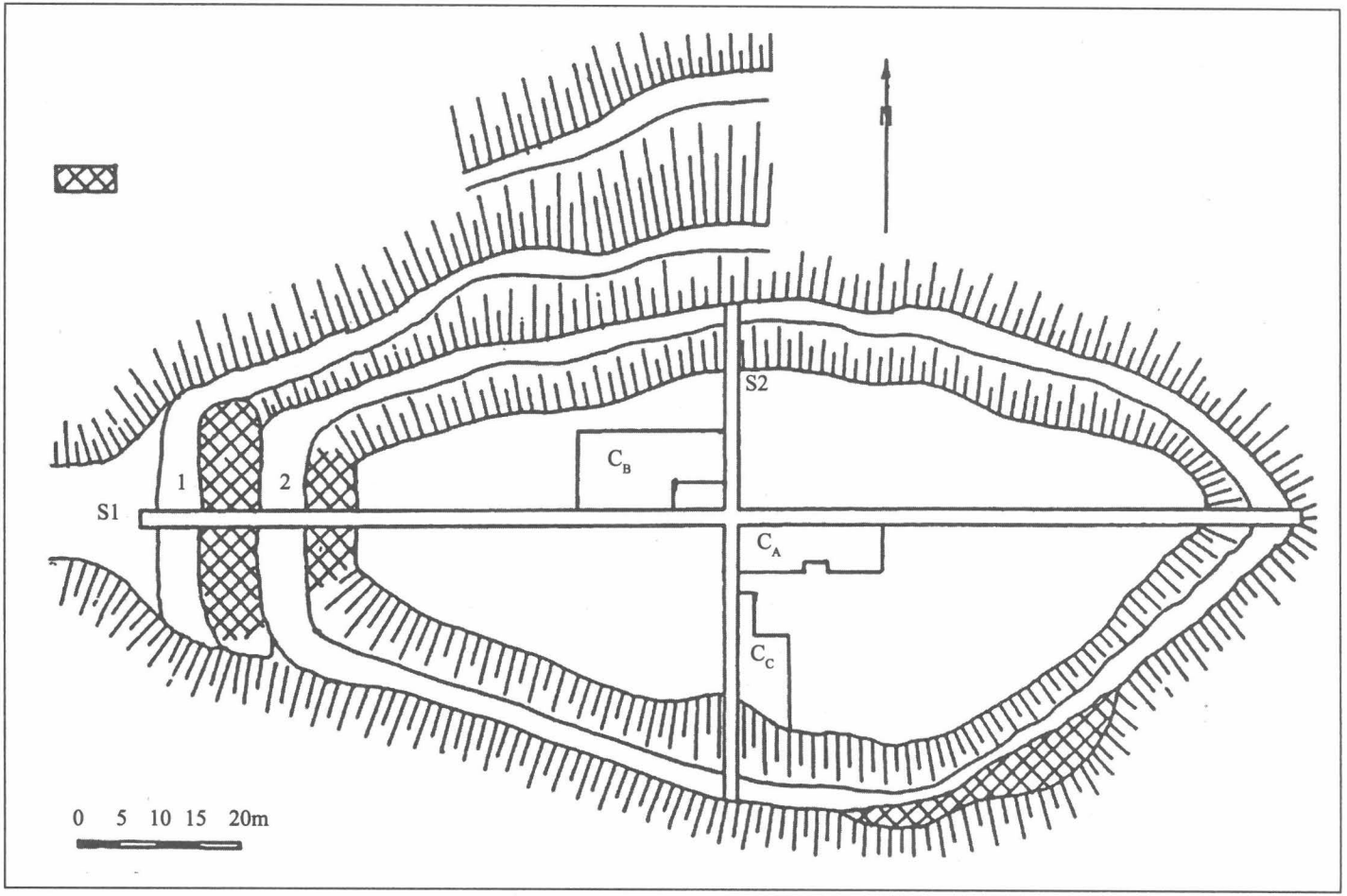

Plate. 3. Marca, Cetate. Plan of Dacian fortress (after S. Dumitrascu). 1. barrage of soil itself; 2. ditches.

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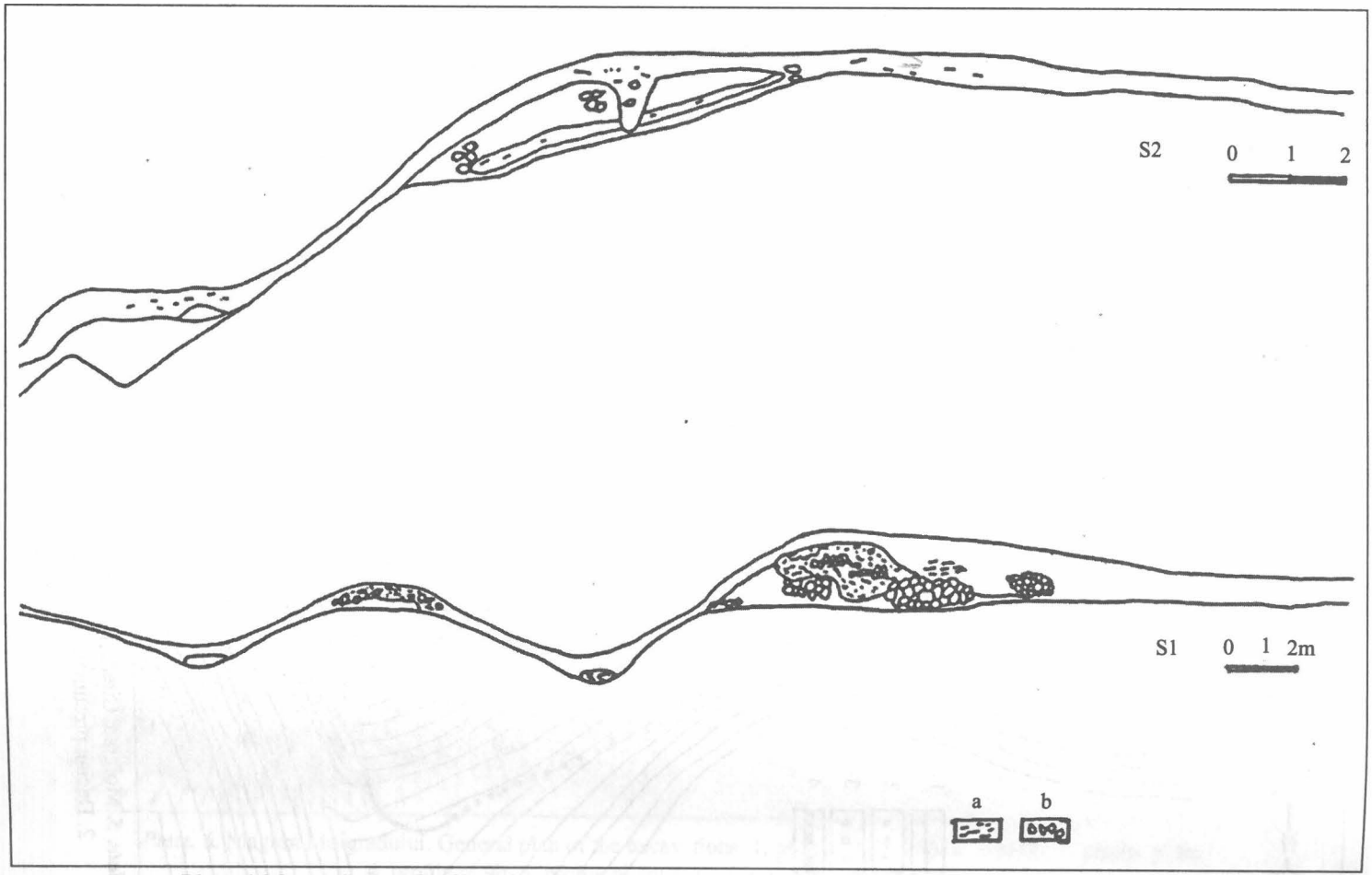

Plate. 4. Marca, Cetate. Profiles of the defensive elements (after S. Dumitrascu): a. burnt wood; b. stone.

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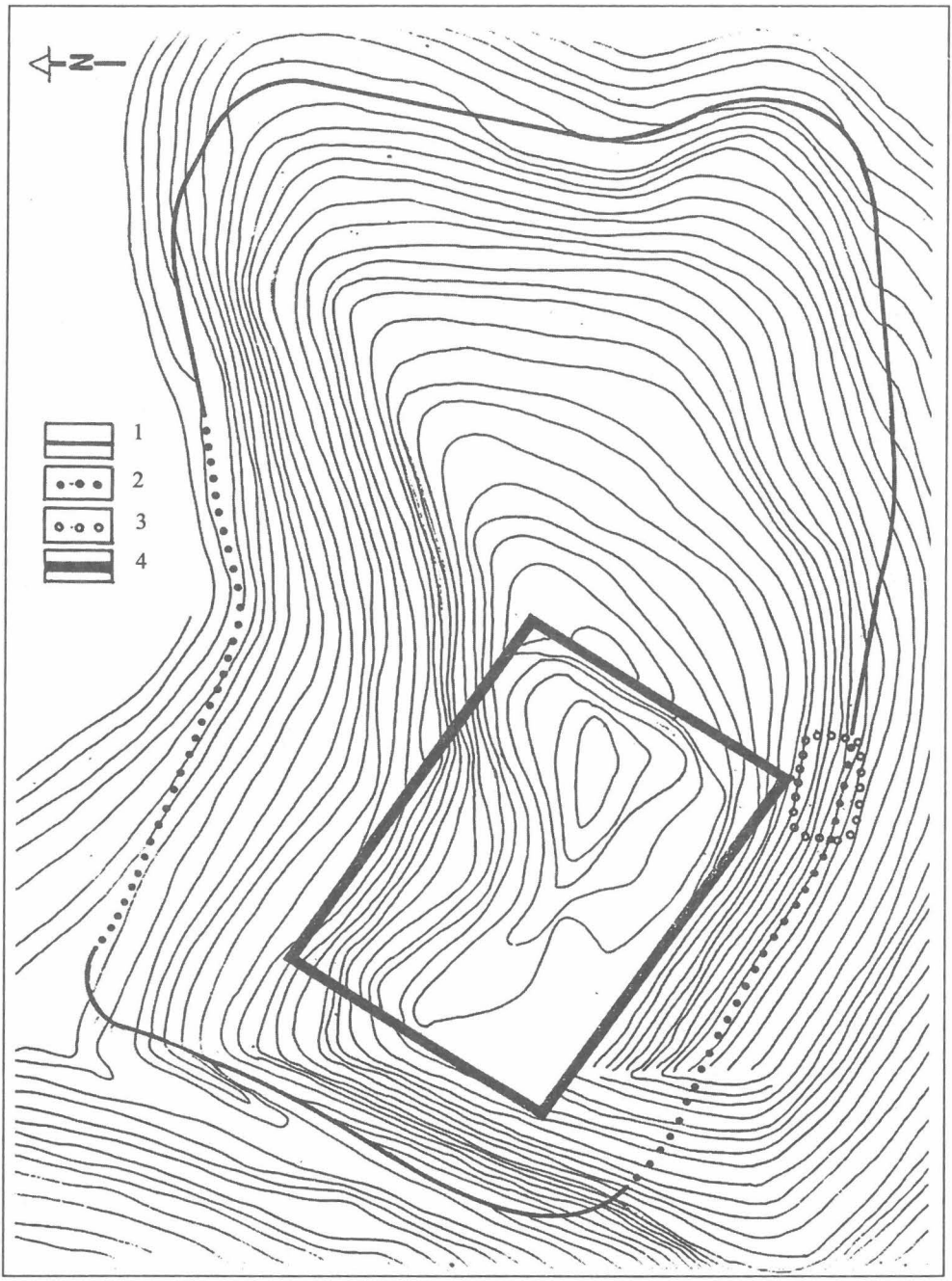

Plate. 5. Moigrad, Citera. Plan of the ancient arrangements. 1. Dacian existent ditch line; 2. Dacian presumed ditch line; 3. perimeter of Roman stone quarry; 4. outline of the Roman fortress.

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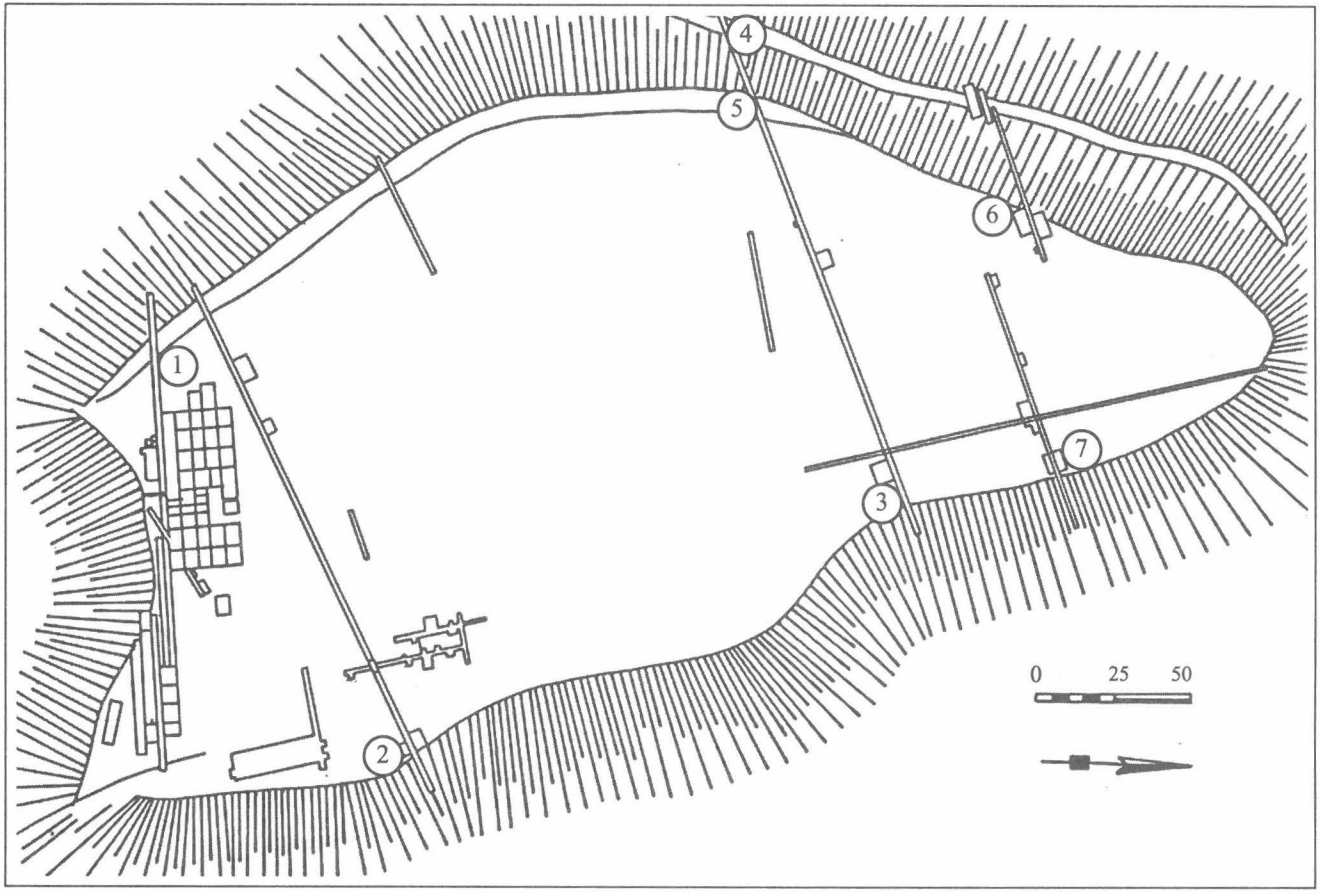

Plate. 6. Magura Moigradului. General plan of the excavations. 1. profile pl.7a; 2. profile pl.7b; 3. profile pl.9a; 4. profile pl.9b; 5. profile pl.8c; 6. profile pl. 8b; 7. profile pl.8a.

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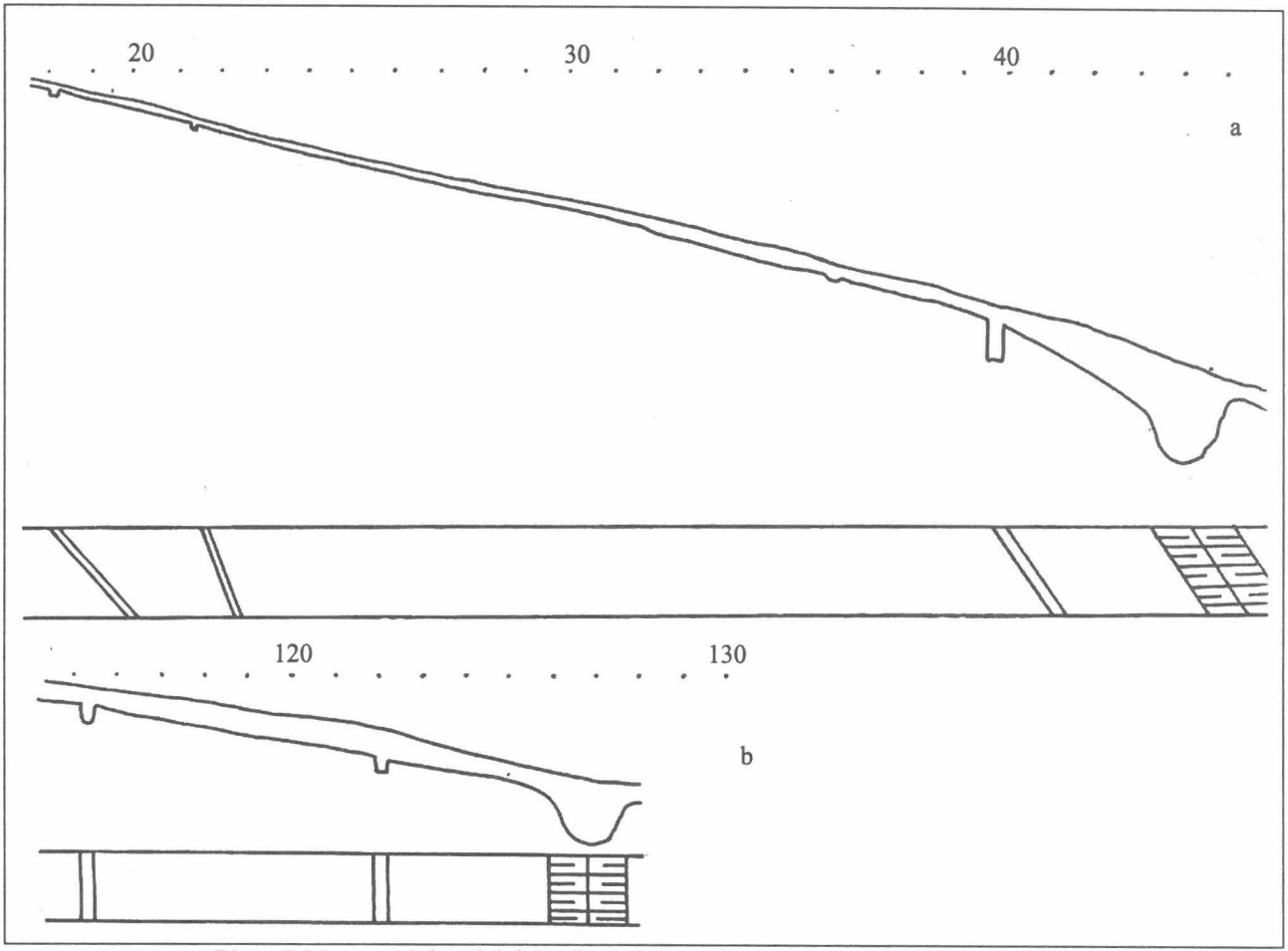

Plate. 7. Magura Moigradului. Profiles of the defensive elements: a.1989; b. 1989.

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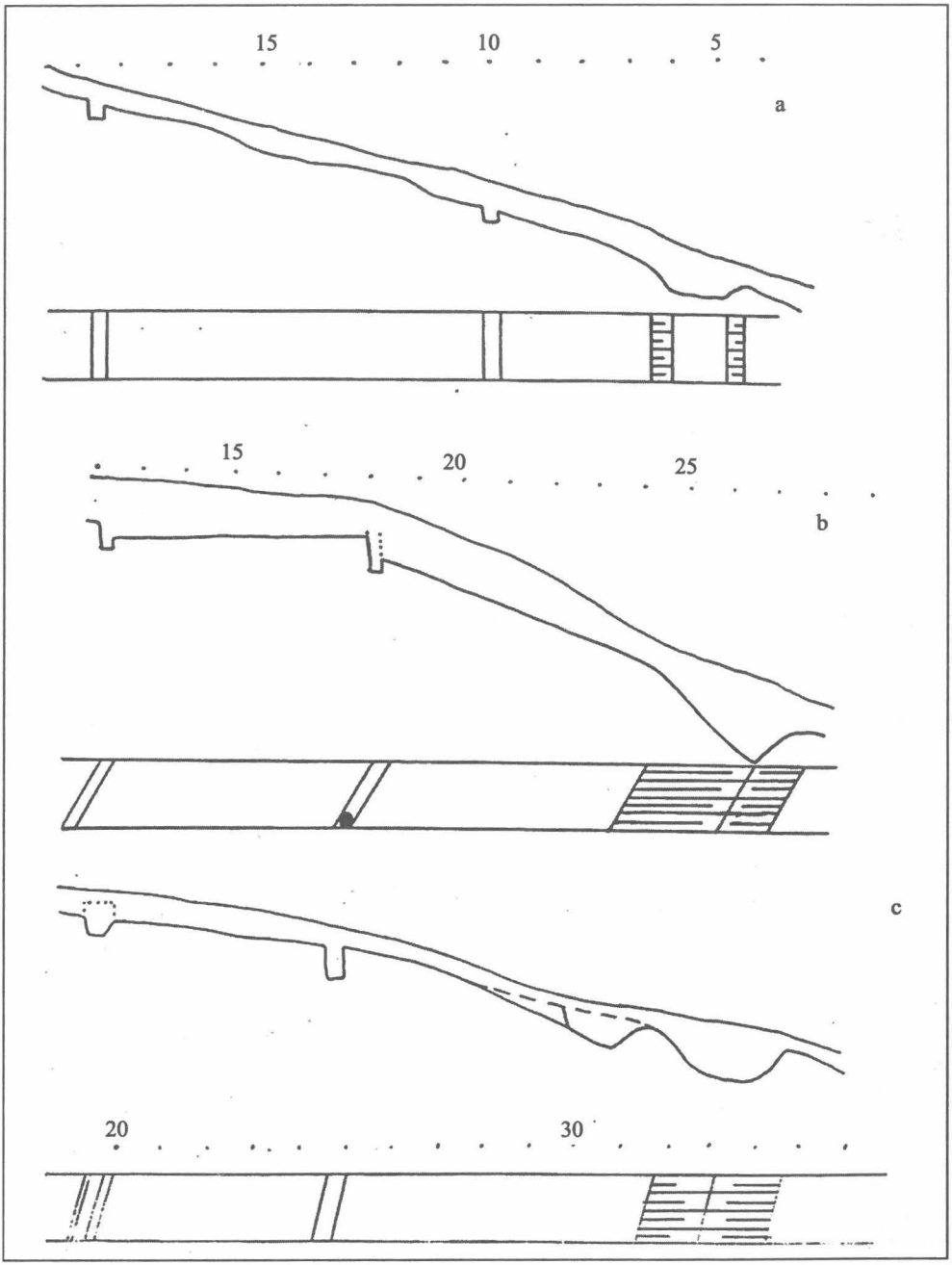

Plate. 8. Magura Moigradului.
Profiles of the defensive elements: a. 1990; b.1992; c.1992.

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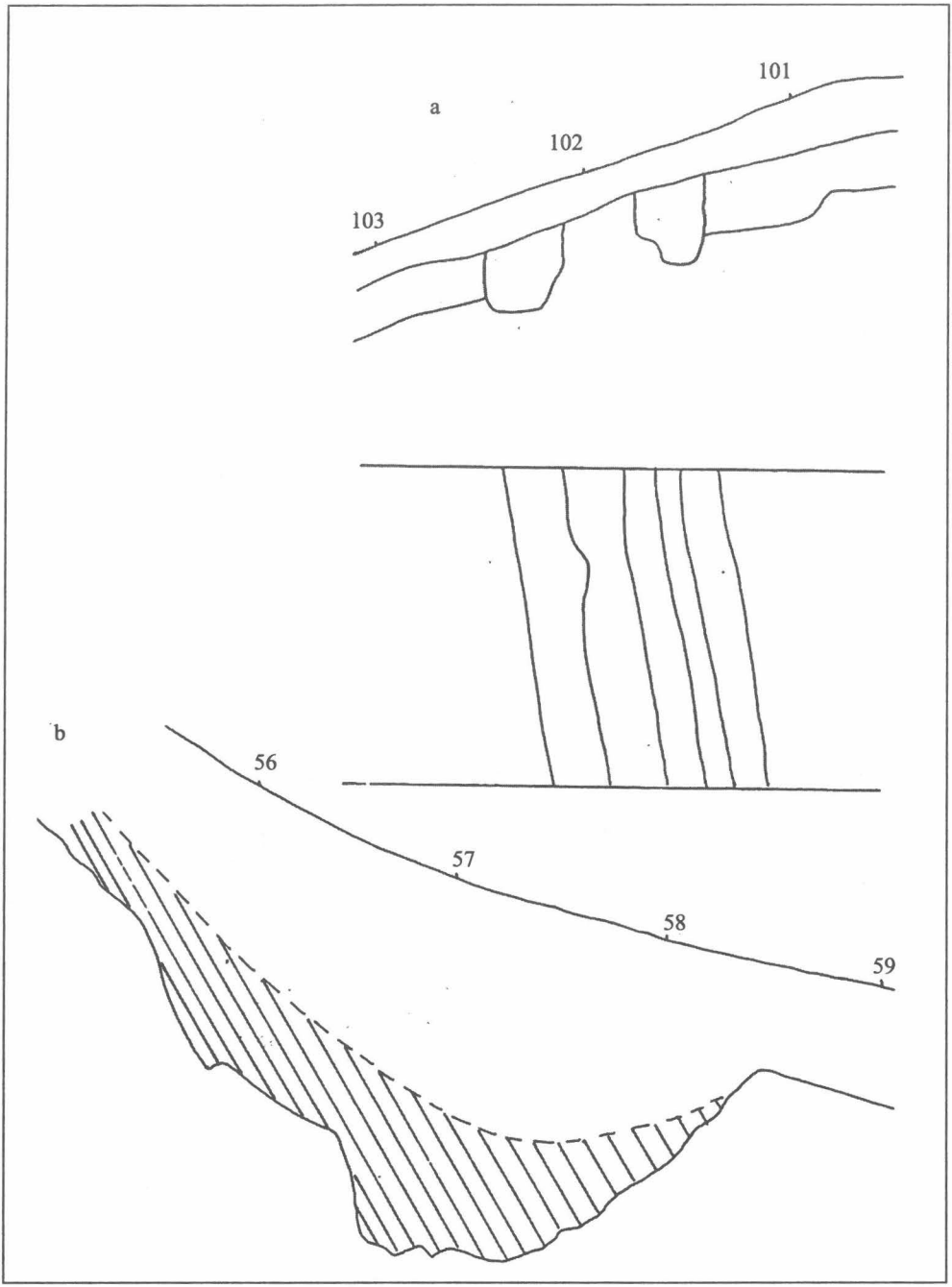

Plate. 9. Magura Moigradului. Profiles of the defensive elements: a. 1993; b. 1992.

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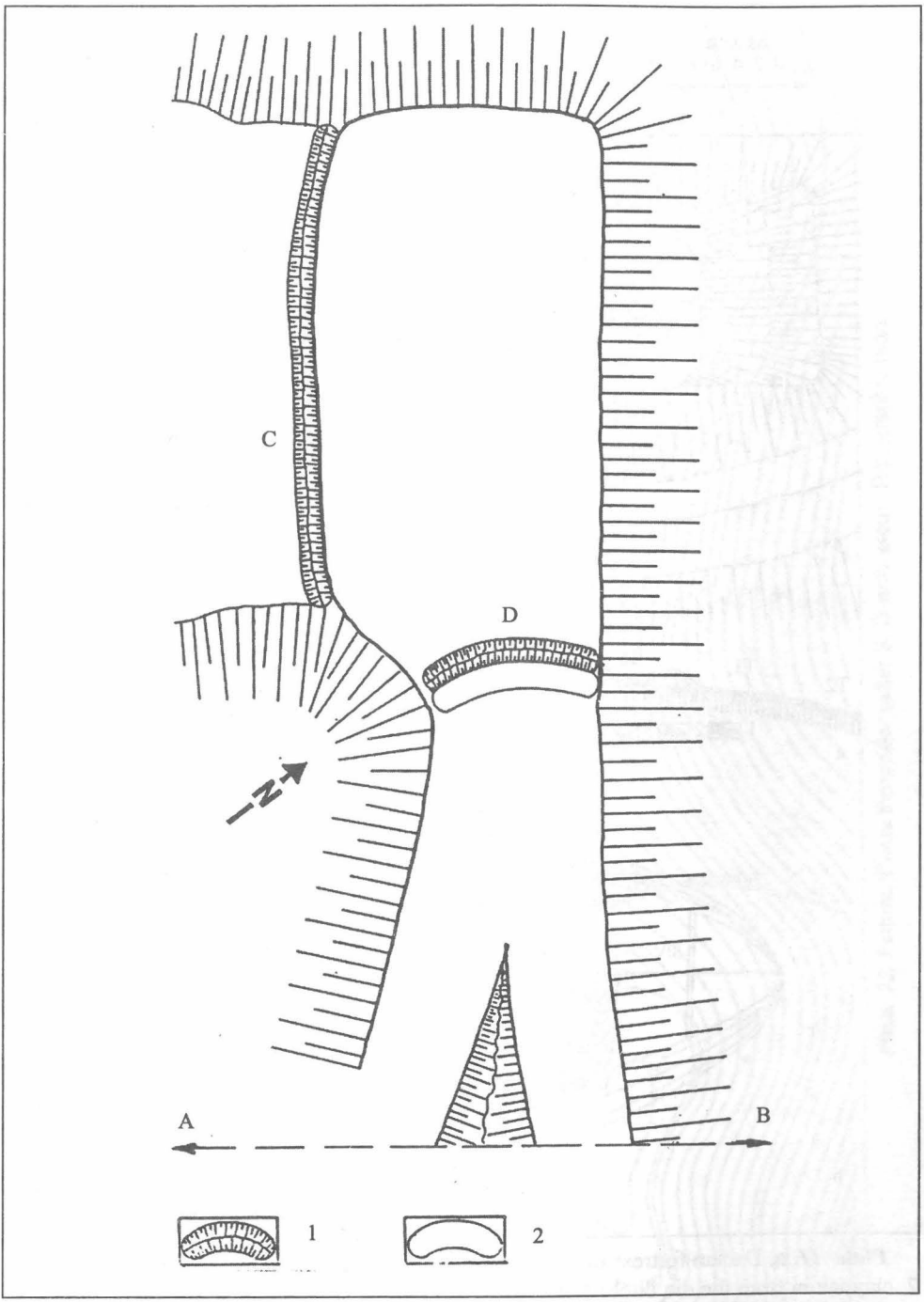

Plate. 10. Oarţa de Sus, Magura. Scheme-plan of the Dacian fortification: 1. ditch; 2. barrage. A. towards Bicaz; B. towards Oarţa de Sus; C. ditch with leveled barrage; D. barrage with "interior" ditch.

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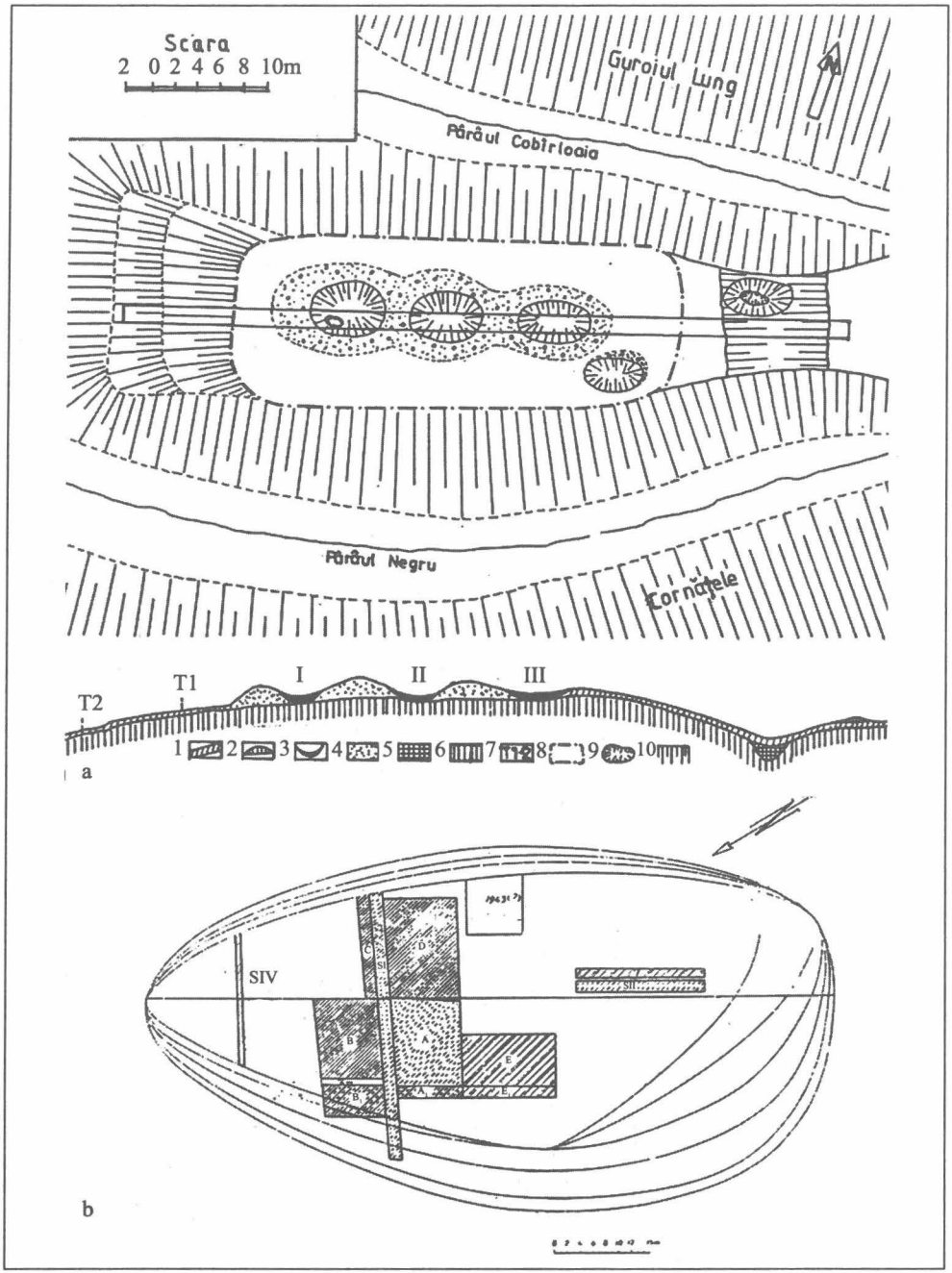

Plate. 11. a. Dacian fortress of Clit, Gureţul Negrilor (after S. Dumitrascu): 1. humus; 2. clay taken from the din ditch; 3. humus from treasure hunters pits; 4. soil taken from pits; 5. Dacian ditch filling; 6. badland; 7. Dacian terrace; 8. perimeter of the Dacian fortress; 9. treasure hunters pits; 10. slopes lines.

b. Pecica, Santul Mare. Plan of the settlement with archeological dig carried out.

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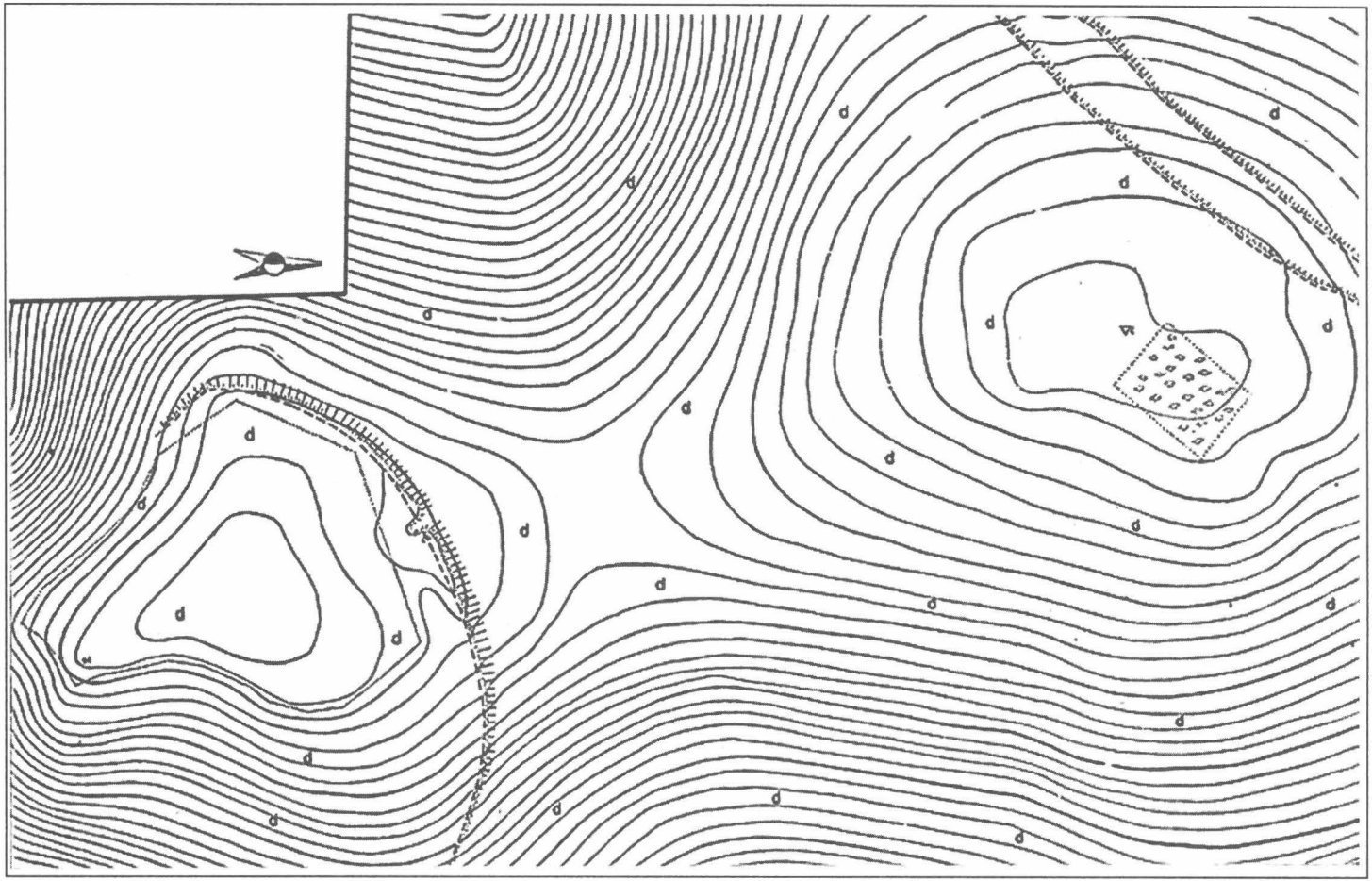

Plate. 12. Petrani, Piatra Petranilor (after S. Dumitrascu). Topographic plan.

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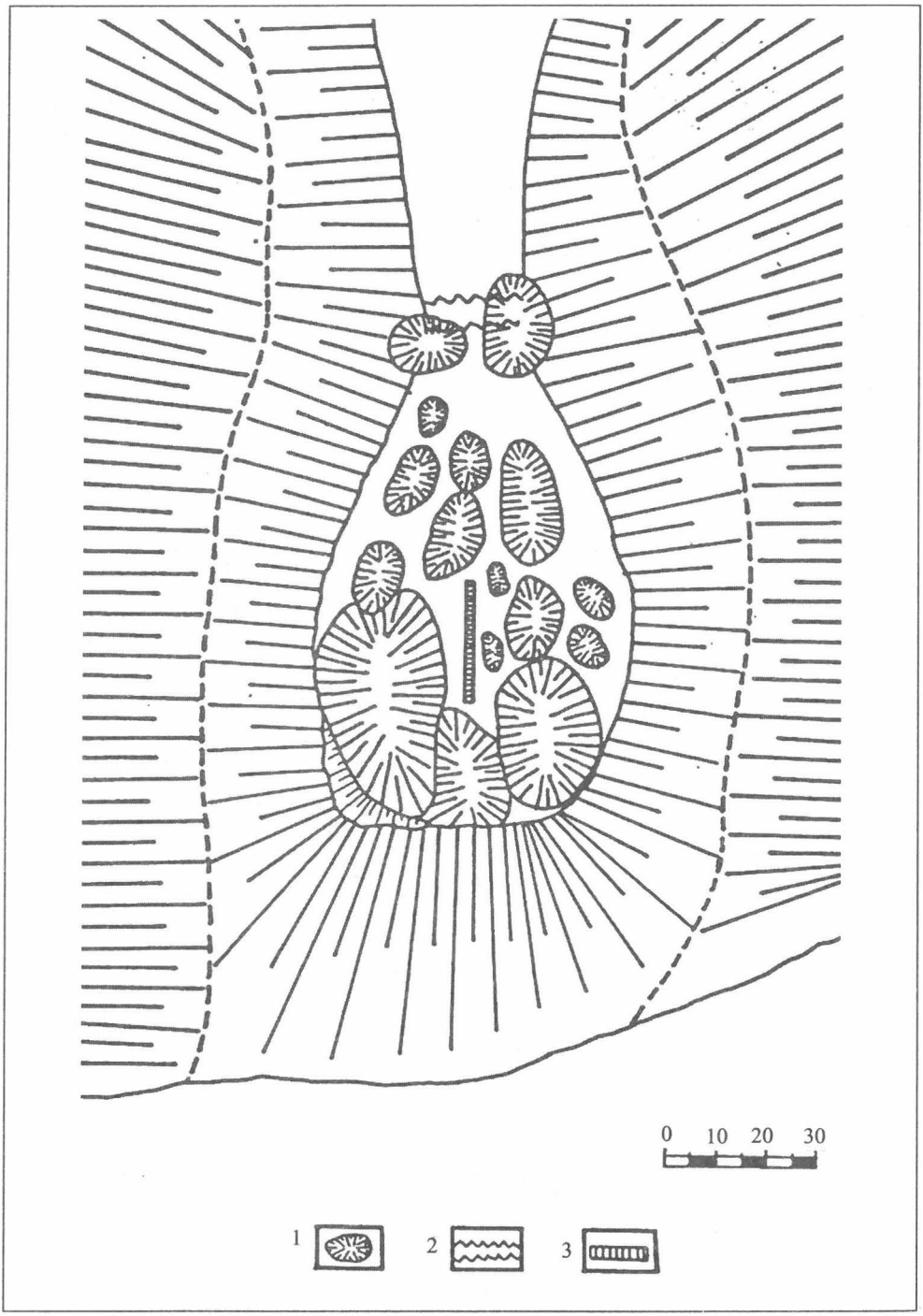

Plate. 13. Sacalasau Nou, Dealul cu Bani (after S. Dumitrascu). Plan of the Dacian fortress: 1. treasure hunters pits; 2. Dacian ditch; 3. archeological sondage.

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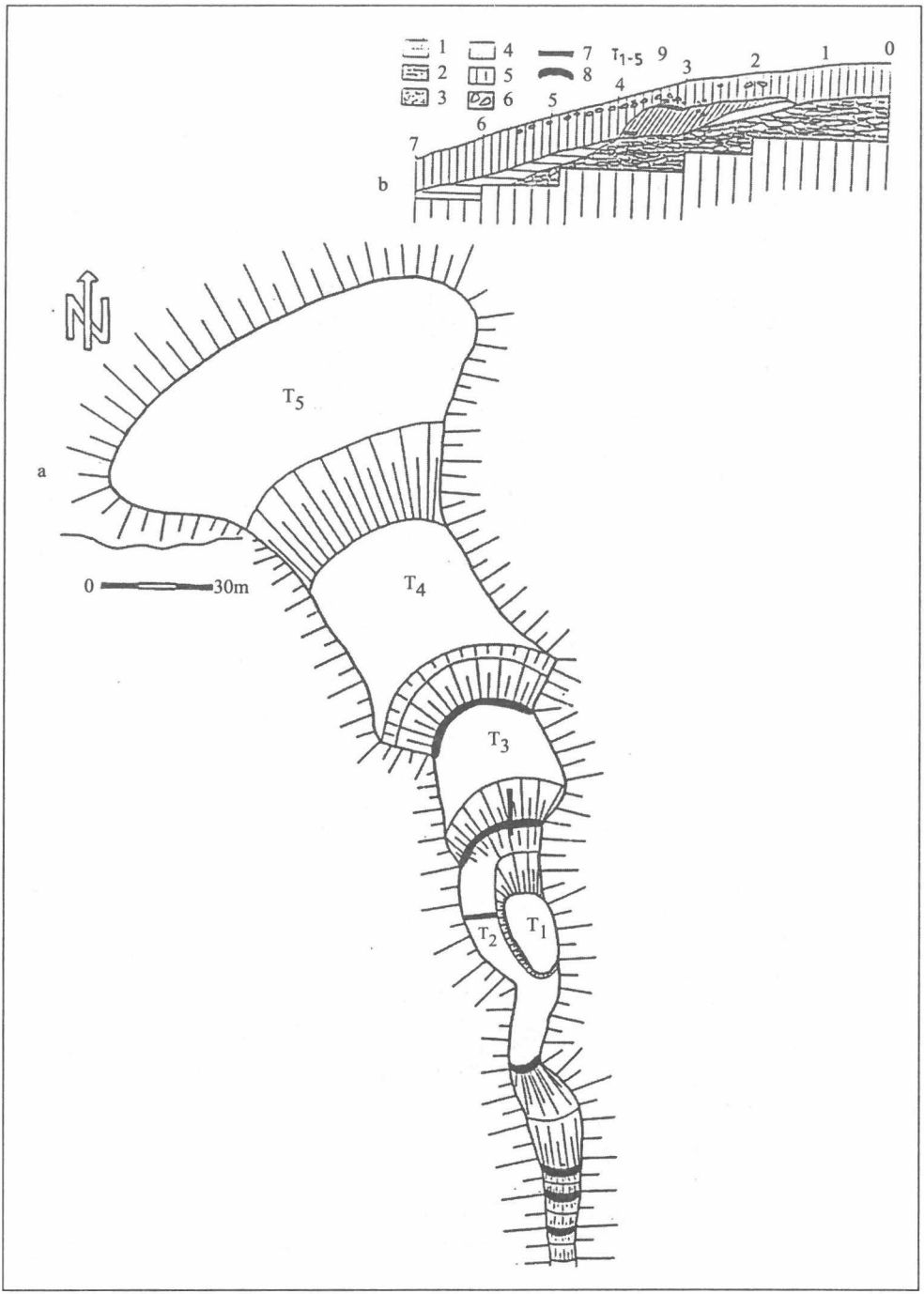

Plate. 14. Stârciu, Cetățuie. a. Scheme-plan of the Dacian fortress: b. sondage profile of the year 1969. 1. badland; 2. yellow soil with stones; 3. burnt clay; 4. soil with burnt wood; 5. black soil; 6. stones; 7. sondage 1969; 8. Dacian barrages; 9. Dacian terrace.

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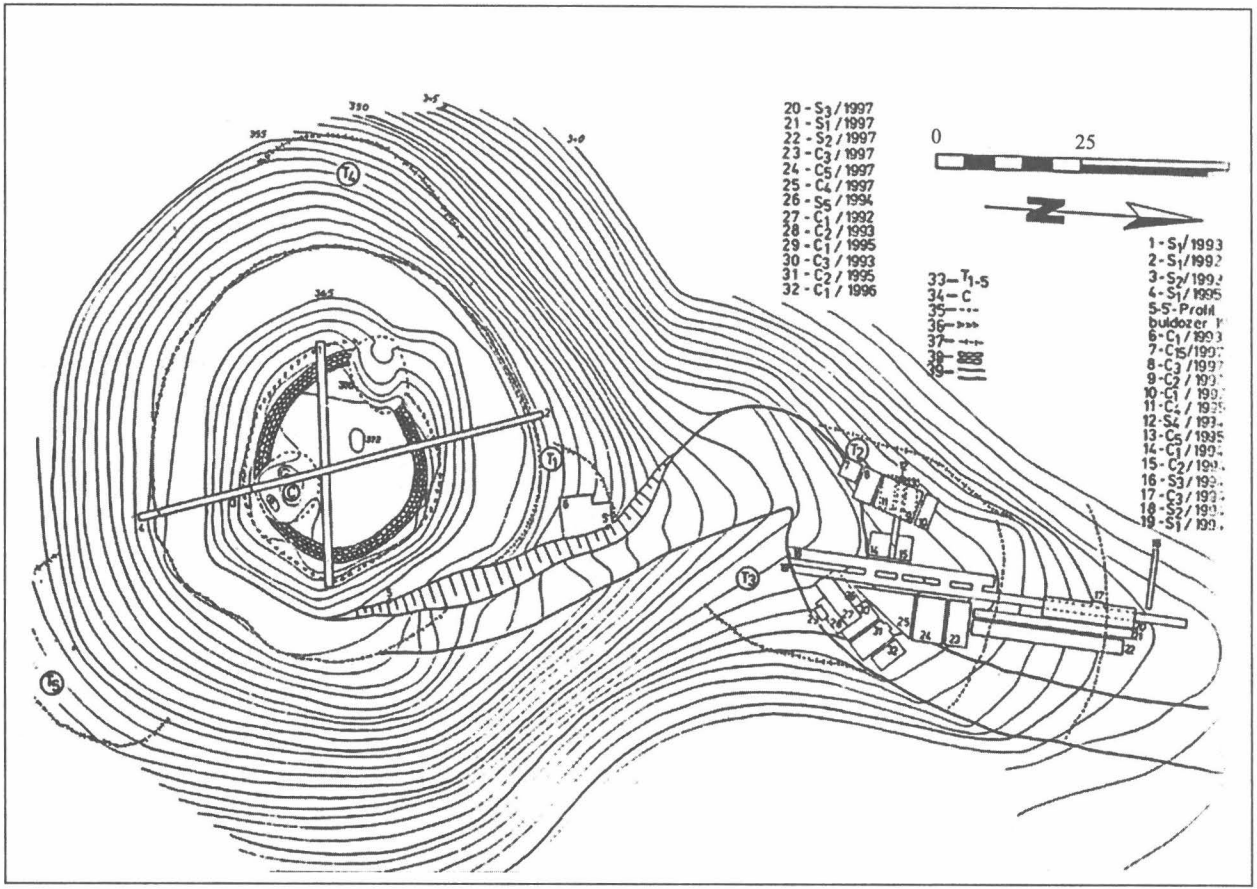

Plate. 15. Simleu Silvaniei, Cetate. Topographic and general plan of the excavations (nr.1-32); 33. Dacian terraces; 34. medieval cistern; 35. Dacian fortifications line; 36. medieval fortification berm; 37. Dacian terrace edge; 38. medieval wall of the premise (XIV-XV cen.); 39.modern road.

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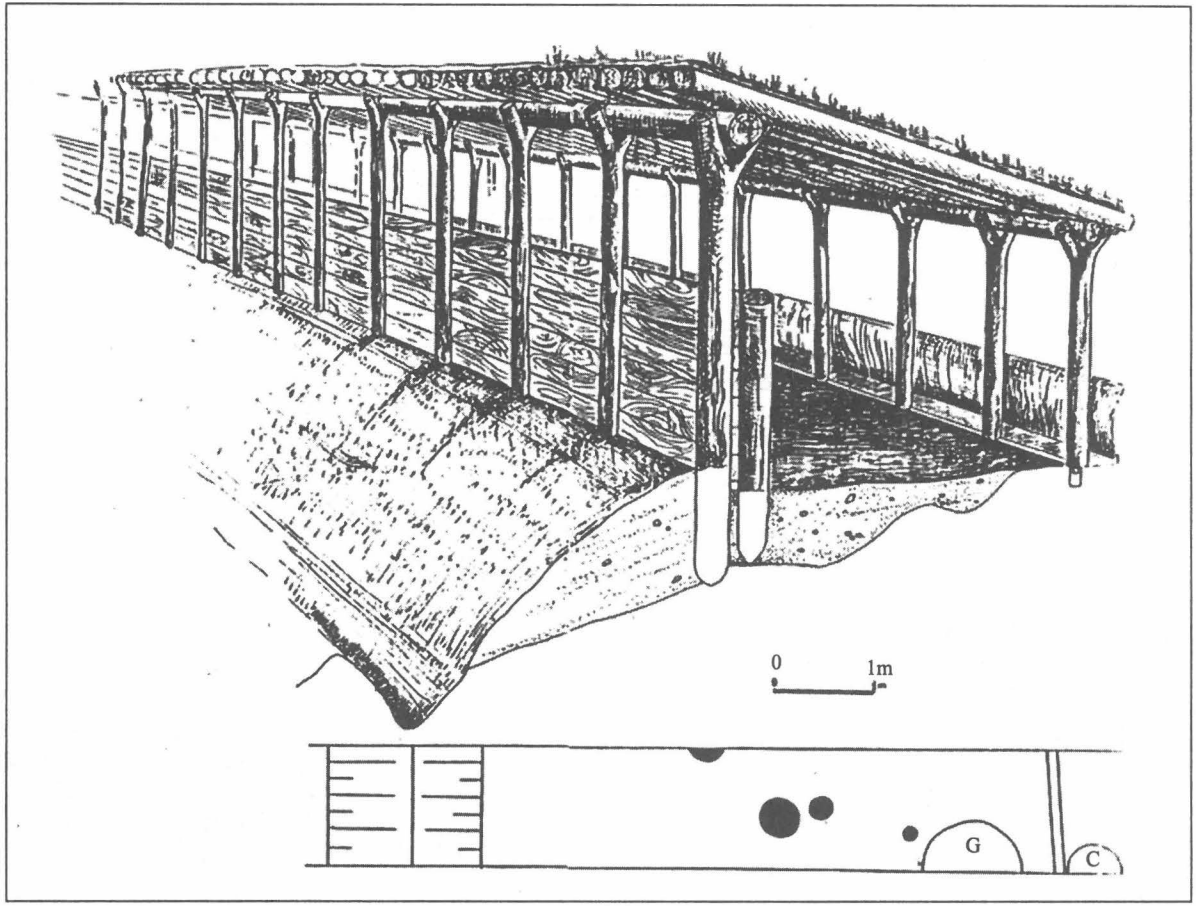

Plate. 16. Simleu Silvaniei, Cetate. Superior circumvallation (end of the I cen. A.D.). Proposal of the palisade reconstruction with covered round road and dwelling in palisade. C. oven; G. pit.

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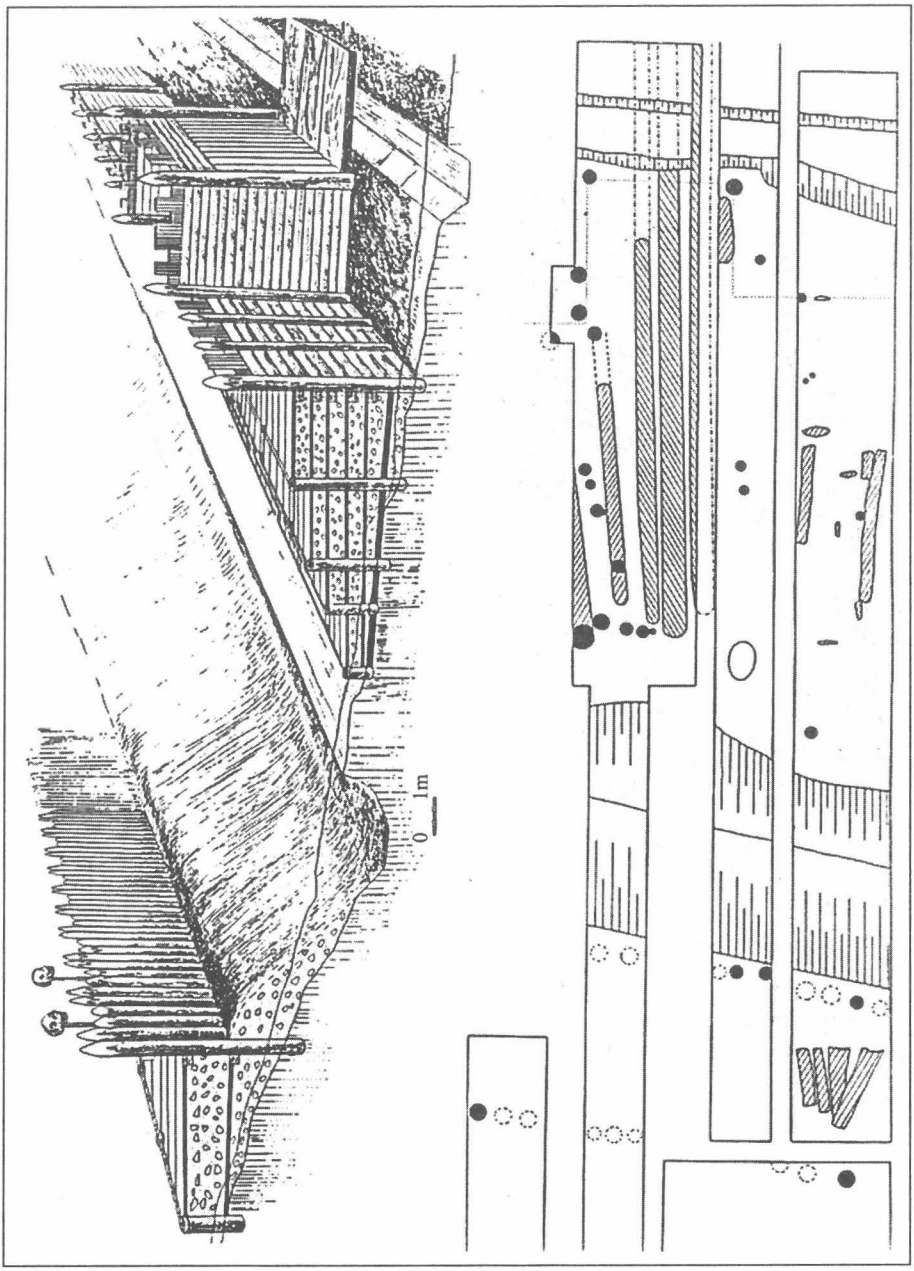

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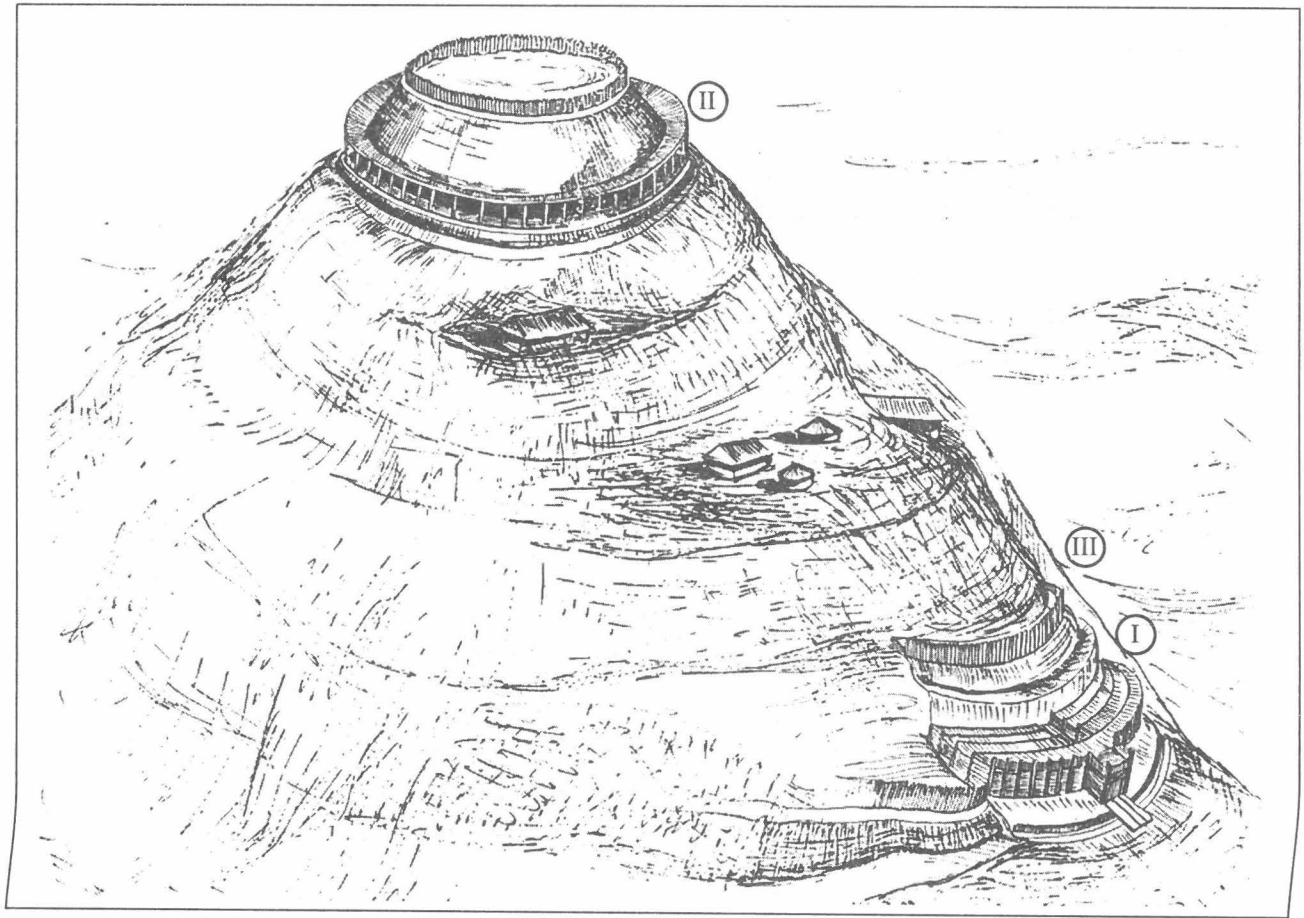

Plate. 18. Simleu Silvaniei, Cetate. Proposal of reconstruction (H. Pop) of fortified hill in La Tene D. I. Phase I (beg. I cen. B.C.); II. Phase II (end I cen. A.D.); III. Phase III (beg. II cen. A.D.).

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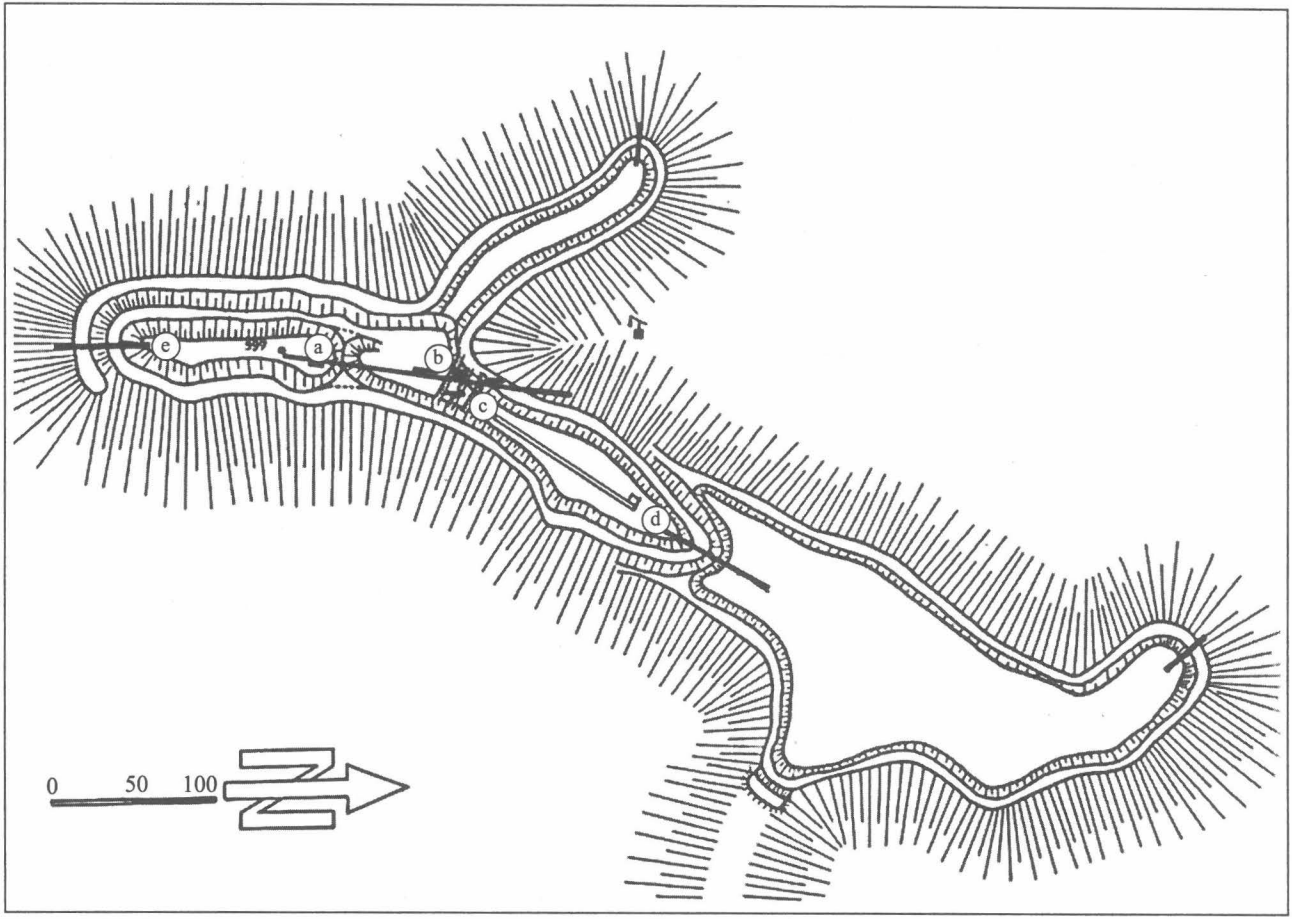

Plate. 19. Simleu Silvaniei, Observator. Scheme-plan of the hallstattien settlement re-used by the Dacian afterwards (a-e) and in medieval times (between b and c). Archeological excavations carried out in the years 1994-1996, 1999-2001.

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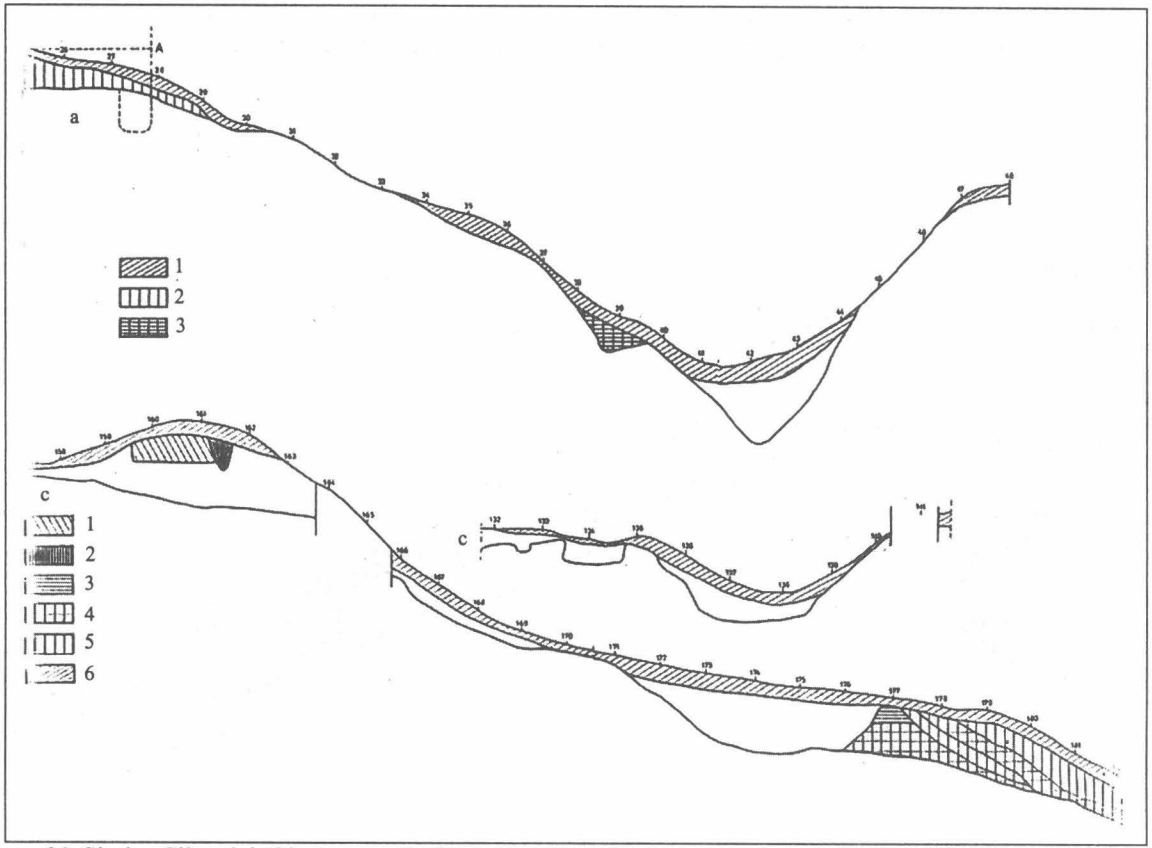

Plate. 20. Simleu Silvaniei, Observator. Profiles of the Dacian defensive elements. a-sector a (1. humus; 2. barrage filling - Dacian terrace; 3. filling of the counter escarps foundation, A- ground level of the Dacian terrace backwards palisade); b. sector b; c. sector c (1. palisade foundation; 2. pillar remnants; 3. top of the ditch edge; 4. soil from the ditch edge phase I and II; 5. stone from the ditch edge phase I and II, humus.

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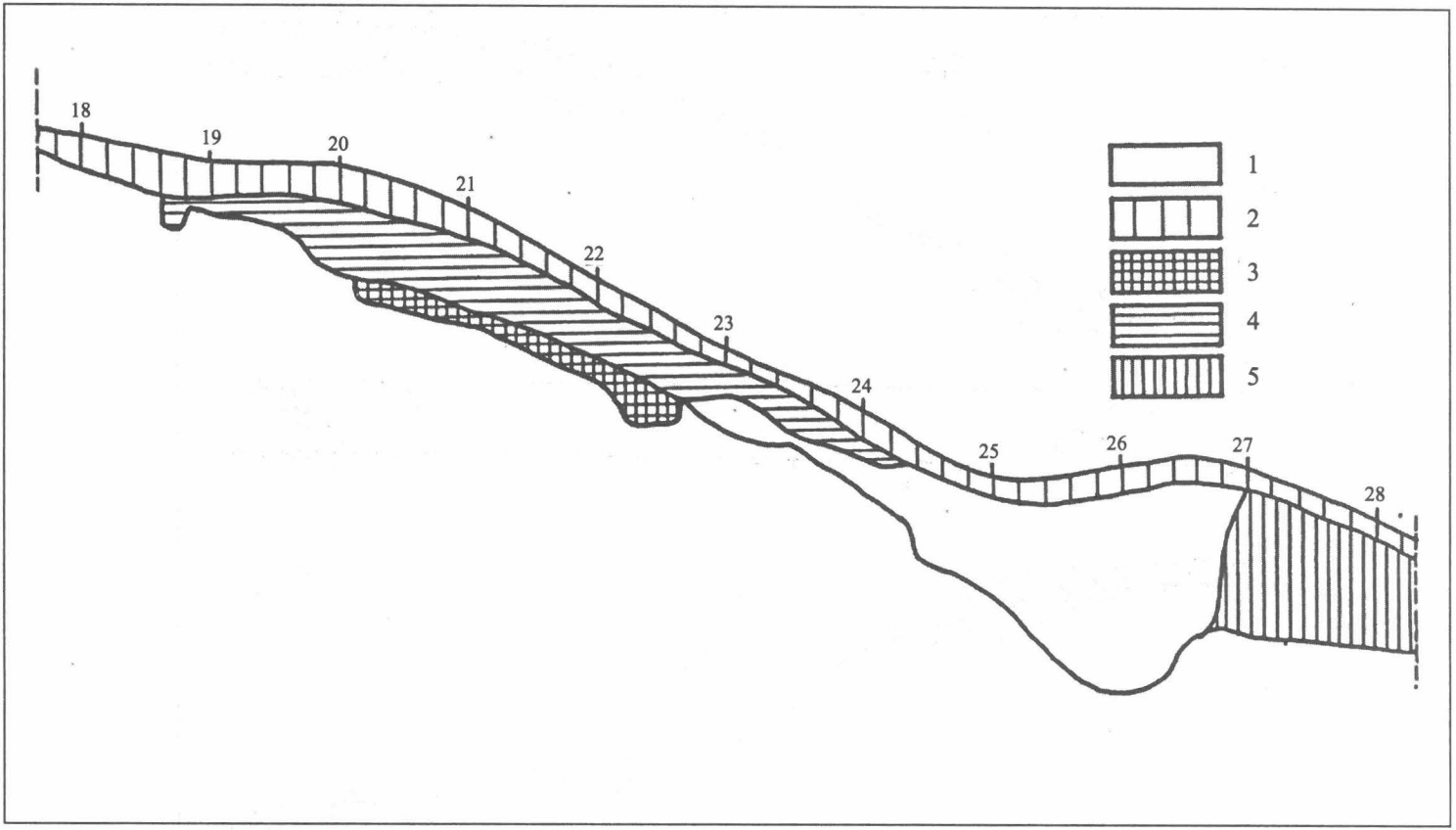

Plate. 21. Simleu Silvaniei, Observator. Profile from palisade and Dacian ditch of the southern sector:
1. filling ditch; 2. humus; 3. palisade basis; 4. barrage traces; 5. ditch edge.

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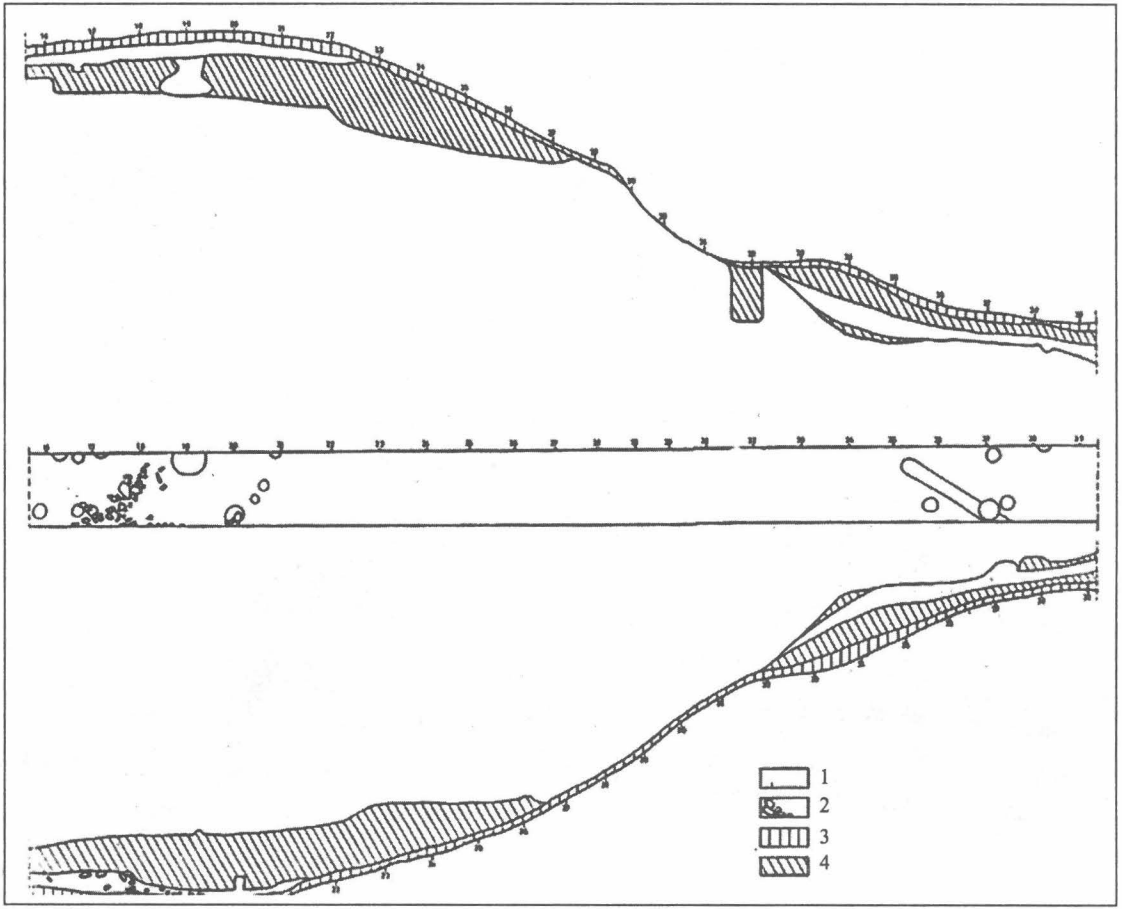

Plate. 22. Simleu Silvaniei, Observator. Profile and plan of the northern sector of Dacian fortification: 1. Dacian level; 2. stones from the palisade complex foundation sector d1; 3. humus; 4. hallstattien levels, Dacian and posterior slides.

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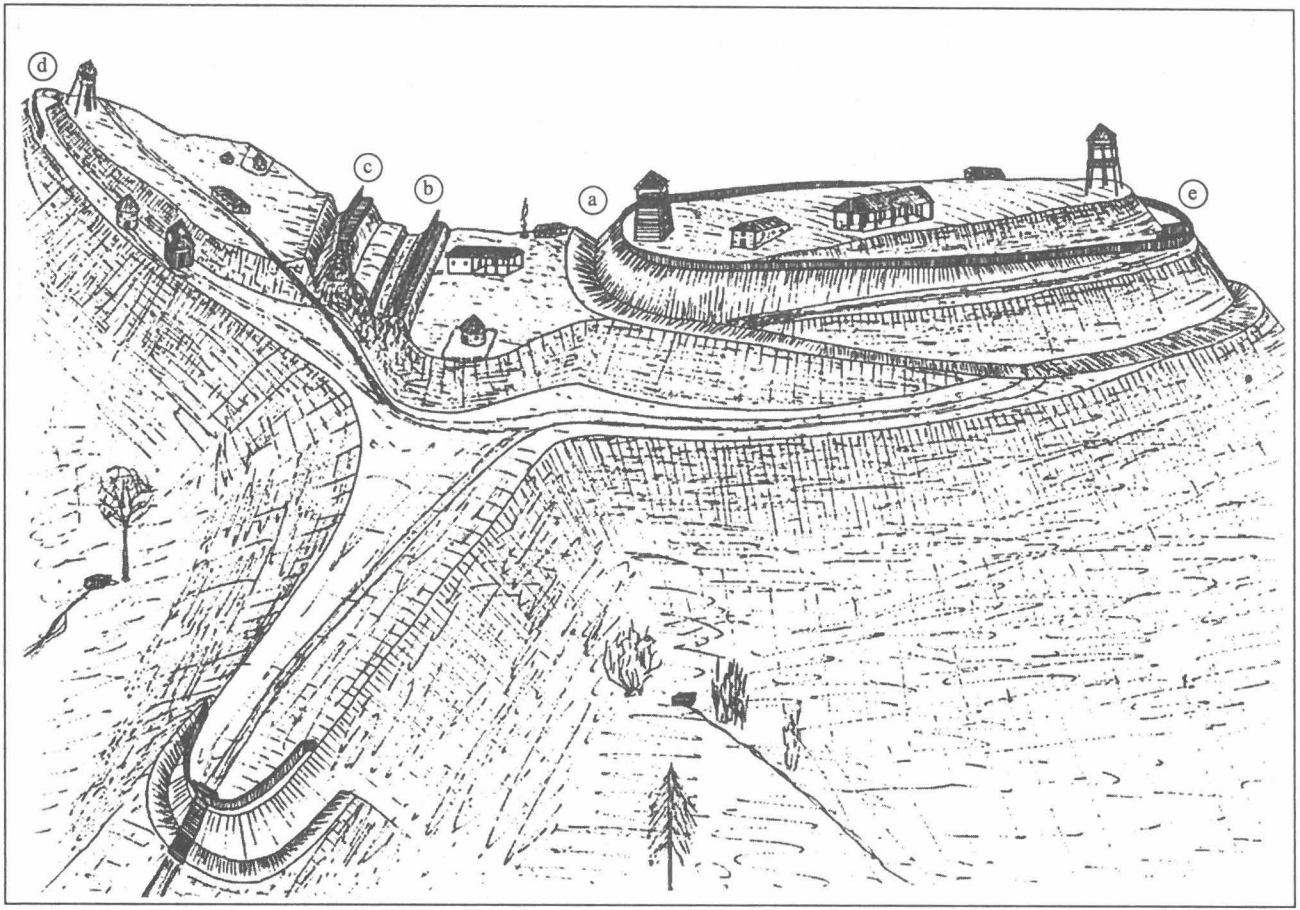

Plate. 23. Simleu Silvaniei, Observator. Proposal of the Dacian fortified settlement reconstruction (second half of the II cen. - I cen. B.C.) with fortification sectors.

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