

THE LATE ROMAN DROBETA I. THE CRUCIFORM BUILDING AND THE FORT GARRISON IN THE 4th CENTURY A.D.

The late 19th and early 20th century archaeological excavations (*Tocilescu* 1897, 5135; *Bărcăcilă* 1932, p. 233—48; *Florescu* 1933, p. 32—53; *Bărcăcilă* 1937, p. 149—65; *Bărcăcilă* 1938, p. 7—50; *Bărcăcilă* 1939, 74—88; *Davidescu* 1974, p. 187—99)¹ and some detailed architectural observations (*Bărcăcilă* 1938, 24—32; *Florescu* 1964, p. 433—9; *Florescu* 1965, 573—90; *Florescu* 1967, 144—51; *Florescu* 1971, 433—9; *Davidescu* 1976 b, p. 39—49; *Davidescu* 1980, 12—32) established five main phases in the chronology of the Drobeta fort: The 1st phase, from early to 2nd c., when a typical early Roman layout and installations functioned; During the 2nd phase, from early to mid 3rd c. there were some repair interventions to the towers, gates and some parts of the defence wall; In the 3rd phase dating to the second half of the 3rd c. there were changes in the interior buildings as to the size and disposition of the barrack blocks, as well as to the turning of the principia into a basilica; the former planimetry was sensibly modified; barrack blocks of a modest kind and size were newly built; during the 4th phase — the 4th until, eventually early 5th c. — the former interior arrangement was entirely abandoned, the area suffering basic changes; a cruciform building as the main installation destined for the accomodation of the troops in garrison, was now erected previous structures were completely demolished the new cross-like edifice overlapping all the former 2nd-3rd c. buildings; the 5th phase, (the 6th century) witnessed a drastic reduction of the occupation of the fort area reduced to its south western corner².

A rich archaeological, historical and epigraphical literature have dwelt with the first three phases of the fort. Therefore in what follows we shall focus our attention on the relation between the general disposition of the cruciform building and the size of the Drobeta garrison during the 4th phase.

¹ See also *Marsigli* 1774, p. 32 first topographical contribution; *Demetrescu* 1883 passim; *Bărcăcilă* 1935, p. 3—6. For the archaeological literature see in general: *Tudor* 1965; *Anastasescu* 1971, p. 425—32; *Davidescu* 1974, p. 187—99; 1976 a, p. 81—92; *Tudor* 1978, p. 448—50; cf. *Benea* 1977, p. 133—45.

² For a slightly different chronology see *Tocilescu* 1897, p. 22 and *Bărcăcilă* 1938, p. 25 (three periods) *Davidescu* 1976 b, p. 91 (four periods); cf. *Tudor* 1973, p. 459.

There has been a common point of most of the archaeologists to usually date the construction of the cruciform building during the reign of Constantine (Tocilescu 1897, p. 9—10; Bărcăcilă 1938, p. 32; Florescu 1967, p. 150; Davidescu 1976 b, p. 43; Tudor 1978, p. 449; Davidescu 1980, p. 180—2). Unfortunately the first 1932 Bărcăcilă's excavations within the fort destroyed almost all the late and early Roman layers to such an extent that the small iron and bronze finds can not be stratigraphically arranged (Florescu 1933, p. 33—4). There are however, some significant Constantinian coins associated with 4th c. pottery and bronze brooches found within the rooms of the edifice, in the area of eastern and western gates and on the median streets (Tocilescu 1897 passim) which are good elements to date the erection of the cross-like building during the reign of Constantine (Tocilescu 1897, p. 130—1). On the other hand some historical arguments related to an active Constantinian military policy and diplomacy in the region (Tudor 1941—1942, p. 134—9; Tudor 1978, 416—53) after the territories of Dacia Ripensis and Moesia Prima were taken over from Licinius' authority in 315/316, highlights the massive reconstruction of the fort and the central building in the third decade of the 4th century.

There are some architectural elements of the 4th c. fort, inherited from 2nd—3rd c. such as the 1.30 m. thick stone wall which was heightened during the period as well as the size and the layout of the fortified area. Some architectural details of the central 4th c. plan, edifice including descriptions of the layout, size, location and the building technique have been already offered by Tocilescu (Tocilescu 1897 passim); Florescu 1933, p. 40—1; Bărcăcilă (1938, p. 26—8); Davidescu (1976b, p. 39—49; 1980, p. 12—32). There were, on the other hand some massive constructive interventions to the northern, eastern and western gates which were blocked with large, rectangular towers (fig. 1). The access into the fort was now possible only through the southern gate (*porta praetoria*) where in the front of the early square towers two other semi-circular half towers were attached by walls to the precinct. The *agger* of the early fort sloping 5 m. down untill *via sagularis* was removed. It became therefore possible the building at each 3.5 m of a row of 0.80 × 0.80 m. stone and brick pillars parallel to the fort wall³.

The central building is in a right cross shape (fig. 1). It consists of 78 rooms. The rows of rooms are preceded by a walled portico with columns at each 2.30 m. Because of the wall which seems to have been dumpy the access into the rooms was possible only from the interior of the portico. The median 6.50 m. wide streets were strictly oriented N-S and E-W very likely following the early route of *decumanus* and *cardo*.

The rows of the rooms are arranged in four segments in right angle. The north-western and north-eastern segments have eighteen rooms each totalling thirty six rooms; the south-western and south-eastern segments have twenty one rooms each totalling fourty two. That gives a

³ There is also a 4th c harbor installation built subsequently to the first consisting of two stone walls bonded to the front of the south east and south west hoofe-like towers; see Davidescu-Tudor 1976, p. 40—6.

certain assymetry to the layout of the building. While the northern, eastern, and western pairs of rows of rooms are 44 m. long the southern are 54 m.

It is hard to reject the opinion that the only reason of the building and functioning of these rooms was the accomodation of the troops in garrison. The finds inside the rooms and at the gates, although relatively few, are significant for the character of the occupation: spear and arrow heads, a ring, an iron axe, bronze brooches with bulb — like heads, buckles, spurs, knives, bracelets, little spoons (Tocilescu 1897, p. 112, 115, 118, 132). Therefore the rows of rooms are be considered barrack forming the large central large cruciform building and the rooms proper as *contubernia*.

The distribution of the rows of rooms of the edifice suggests that the early early castrametation was vaguely followed in the later period. Given the fact that in the 4th c. *porta praetoria* which was also the main entrance in the 2nd—3rd c. was now the only way of access to the interior of the fort while *porta decumana* on the northern side was blocked, the two pairs of rows of rooms in the northern half appears as placed in the old *raetentura* while its southern half is to be considered as the former *praetentura*. The layout of the central cruciform building gives an arrangement of the rooms longitudinally, *per striga* (east-west) and transversely, *per scamna* (north-south).

This kind of disposition of the *contubernia*, arranged in parallel rows of barrack blocks along the former *via praetoria* and *via principalis* seems to be unique among the 4th c. auxiliary forts known so far in the Empire. The Diocletian's palace in Spalato (Crema 1959, p. 612—20 fig. 810; Duval 1961, p. 76—117; Brothers 1972, p. 175—86; Fellmann 1979, p. 47—55) (fig. 2 a) and the Tetrarchic principia in the Palmyra fortress (Michalowski 1968, p. 24—9; Fellmann 1976, p. 173—91; Kowalski 1994, p. 39—70) (fig. 2 b) both usually invoked by the specialists as analogies to the Drobeta central building show four large rectangular buildings framing porticoes built along the *cardo* and *decumanus*⁴. Recently a T-shape disposition has been revealed in the South Shields fort in its 7th period. The street leading from the intersection to the principia is colonnaded and has barracks behind (Bidwell—Speak 1994, p. 40—2). Another T-shape disposition appears in the case of the Lejjun legionary fortress, with *principia* laying at the end of *via praetoria* (Parker 1988, p. 19—20, fig. 2).

Fortuitous or not it is strikingly obvious that the constructive variants with *contubernia* disposed along the main porticoed streets appears in an Illyrian milieu, either in an ethnic territory as Spalato was, or garrisoned with troops of Illyrian origin like Palmyra with *legio I Illyricorum*) (NDOr. 32, 30) and Drobeta with *cuneus equitum Dalmatarum*. Building engineers could be supposedly seen as bearers of this constructive conception both in the Eastern and in the Illyrian provin-

⁴ The Palmyra Diocletianic *principia* has a tetrapylon at the intersection of *via principalis* with *via praetoria* in the cruciform arrangement both with colonnades framed by four building blocks on each side of the streets. *Porta praetoria* is oriented to the south-east.

ces. Unlike the cases cited above the variant of building regular rows of stone barracks along the main streets has been adopted in the case of the Drobeta fort. The arrangement is earlier than that of *Alta Ripa* (Altrip), Alzey or Mogorjelo of mid 4th c. where the barracks were bond to the interior face of the fort wall in order to avoid destruction in the case of an outer firing (von *Petrikovits* 1971, p. 184—5 fig. 18—19; 186; 202 fig. 31; von *Schnurbein-Kohler* 1989, p. 508—26; von *Schnurbein* 1991, p. 208—9 [Altrip]; *Oldenstein* 1986, p. 235—44 [Alzey]; *Dyggve-Vetters* 1966, passim; *Vetters* 1967, p. 145 [Mogorjelo] (*Fig. 3 a, b, c*). *Abusina* (Eining) has barracks also disposed along the fortlet wall (*Mackensen* 1994, p. 491, fig. 8) (*Fig. 4*) *Divitia* (Deutz) is also Constantinian in date (*Carroll-Spielecke* 1993, p. 322 fig. 1) and has the same tradition of concentrating the regular barrack blocks to the central area like at Drobeta (*Fig. 5*).

A main aspect of the layout and the disposition of the Drobeta cruciform building is accommodation surface within the rooms in close relation with the size of the garrison (*Fig. 6*).

The *praetentura* has in all 42 rooms with a simetrical disposition. There are 21 rooms on each *latera* distributed as follows: *latus dextrum* has twelve 3.5×3.5 m rooms (= 145.80 sq.m.) and nine 4×4 m. (= 144 sq.m.) rooms having in all 289.80 sq.m.; *latus sinistrum* has an identical distribution, therefore another 289.80 sq.m. There is an overall 579.60 sq.m. for accommodation in *praetentura*.

The *raetentura* has 36 rooms with the same simetrical disposition on both *latera*: thirteen 3.5×3.5 m rooms (= 157.95 sq.m.) and five 4×4 m. rooms (= 80 sq.m.), therefore 237.95 sq.m. in *latus dextrum* and another 237.95 sq.m. in *latus sinistrum*. There was a space of 475.90 sq.m. for accommodation in *raetentura*.

The average surface for the accommodation for a soldier is usually considered to have been to c. 2.50 to 5 sq.m. (*Mackensen* 1994, p. 492). Considering at least c. 2.50 sq.m. which seems closer to the real necessity for a man to sleep or rest one obtain 6 men for each 3.5×3.5 m (= 12.50 sq.m.) room and 8 men at the most for each 4×4 m. (= 16 sq.m.) room⁵ (*fig. 6*). That would give an overall figure of c. 236/40, 250 men

⁵ It has been showed that during the Principate the suitable space for accommodation of eight men (*contubernium*) in a barrack block was a room of about 4×4 m. The variations around this size depending on the circumstances (von *Petrikovits* 1975, p. 35—43). In Britain (Chesters, Carzield, Benwell) and Germany (Oberaden, Rodgen, Valkenburg, Dangstetten) the excavations carried out in the barracks housing cavalry forces revealed that in a single barrack block one could accommodate personnel from two turmae of 30 or 32 men each. At Benwell, the only investigated barrack has nine *contubernia*, estimations being that if an infantry barrack had nine a cavalry one had eight *contubernia* (*Breeze-Dobson* 1974, p. 13—19). The barracks of late Roman period in Britain were an object of investigation but their disposition in almost all the cases seems to have followed the former plan. A part of a 55 m long barrack block has been excavated in the *Vindolanda* fort revealing that it could have had two rows of six *contubernia*. The South Shields late 3rd century barrack block in the south-west of *via praetoria* measured 39.5×6.5 m which makes the size of a *contubernium* of about 3.9×6.5 m. (*Bidwell* 1991, p. 9—15). In Germany the late fort at Alzey has barracks of 8×5 m. bond to the interior face of the wall (*Oldenstein* 1986, 236—8, fig. 1).

at the most who could be easily accommodated within the 475.90 sq.m. of the stone barrack blocks in the *raetentura*. In the *praetentura* the 579.60 sq.m. offer a space for accommodation for c. 288/90, 300 men at the most (fig. 7).

One can notice, on the other hand the difference of room between the more reduced *raetentura* to the north and the larger area of *praetentura* to the south. This seems to have had a certain significance as to the distribution of the units mentioned by Notitia Dignitatum.

The section for Dacia Ripensis records two regiments garrisoned at Drobeta: *Cuneus equitum Dalmatarum Divitensium* and *Auxilium primorum Daciscorum* (NDO^r. 42, 16; 24). Traditionally *cuneus equitum* as a new type of cavalry unit is a Constantinian creation (Jones 1964, p. 100; Hoffmann 1970, p. 248—9). The *cuneus* type must have developed either from the Tetrarchic *vexillatio equitum* or from the intermediate type of *numeri*, both cavalry regiments (Hoffmann 1970, p. 249).

The Drobetan *cuneus* seems to have been garrisoned for a longer period in or around *Divitia*, from where its surname *Divitensium*⁶ and came to the Middle Danube during the repeated military conflicts with Licinus between 315/6—324. Its soldiers were very likely the builders of the Drobeta stone fort. It could been installed in the bridge-head fort even earlier than 324 for Dacia Ripensis and Moesia Prima were seized by Constantine from Licinus after the battle of Sirmium.

The other unit recorded in the Dacian section was an infantry regiment. The *auxilium* type was also a Constantinian creation (Jones 1964, p. 98) proceeding either from early cohorts or as a newly reconstituted units from the remains of some older ones. The Drobetan *auxilium Daciscorum* indicates its provenance from an older regiment formerly withdrawn from Trajan's Dacia and turned into a new type of unit.

The exact size of the later Roman regiments is still a controversial matter among the scholars. R. Grosse (Grosse 1923, p. 274) and A.H.M. Jo-

The Valentinianic fort from Altrip has forty rooms disposed along the defence wall with an interior courtyard. The rooms have about 8.50 × 10.50 m. and are doubled to the courtyard by pillars from a portico (von Schnurbein Kohler 1989, p. 510, fig. 35.1). It is remarkable that both Alzey and Altrip barracks appear disproportionately large in such a measure that the Altrip *milites Martenses* (NDO^c 41,7 = 19) of 260—270 men have a much extraroom. The 4th c (and early 5th c) barracks in the legionary fortress at Vindobona (the 3rd phase) have the same size (5.0 m. × 4.9 m.) as those in the 1st phase (late 1st — early 2nd c. (Harl 1986, p. 322—7). The Eining (Abusina) late Roman fortlet measures 33.6 × 44.8 (= 0.15 ha) and has 12 barracks of ca. 14—20 m² each what gives 204—240 m² room for accommodation of a troop which could not have surpassed 100 men (Mackensen 1994, p. 479—513). Another good term of comparison are the barracks in the Lejjun legionary fortress. The rooms are 5 × 5 m (= 25 m²) Parker 1989, 120—24 fig. 2) but some of them were substantially rebuilt after 363 and refitted to house only 1000 men. Significant results regarding the plan and the size of the barracks were obtained at Pontes (phase I) where in late 3rd and early 4th century A.D. rooms of 4 × 5 m were in function. At Smirna (phase II) the interior space of the 4th century A.D. fort was entirely occupied with barracks arranged on seven-eight rows disposing of rooms of 6 × 6 to 9 × 5 m (Vasić 1991, p. 308—10).

⁶ Hoffmann 1970, p. 177—9; Carroll-Spielecke 1993, p. 385—8.

nes (Jones 1964, p. 681—2) thinks of 500 men for a 4th c. *cuneus* and 250—300 men for an *auxilium*. L. Várady (Várady 1961, p. 369—71) based on a passage of Zosimos (5, 45, 1) exaggeratedly suggests 1200 men for a *cuneus*.

Interesting details on the size and the subdivision of the cavalry units in late 3rd and early 4th c. are offered by the text of a tombstone found at Mckres, near Vidin (AÉ 1938, 97) referring to the the VIth *centuria* of a *Numerus Dalmatarum*⁷.

Numeri where generally styled as cavalry regiments by that time (Hoffmann 1970, p. 248—9). The record of a VIth *centuria* on the other hand would mean that there were ten *centuriae* in a cavalry regiment and the term, instead of *turma*, became official. The size of the former *turma* of 30—2 cavalry men must have been preserved and the subdivision became now a group of six men commanded by an *exarchus*, or twelve under a *bisexarchus* (Lambrino 1933, p. 333—9). There was therefore a drastic reduction in size of the regiments, a fact ascertained for other provinces and proved both epigraphically and archaeologically (Bidwell 1991, p. 9, 13).

Comparing the text of *Notitia Dignitatum* on the troops stationed in the Drobeta fort with the general distribution of the rooms within the cruciform edifice we finally consider that the 36 rooms in the *raetentura* could have lodged about 240 eventually 250 men (troop and the command personnel) of *auxilium I Daciscorum*. The 42 rooms in the *praetentura* were fitted for accomodating the personnel of the cavalry unit, *cuneus equitum Dalmatarum Divitensium*, numbering about 290 eventually 300 cavalry men (troop officers and NCO s). If there were ten *centuriae* each of c. 30 cavalry men, then one can expect to a c. 300 men in strength for this type of regiment⁸.

⁷ DM/Atadis Dorani/filius qui militat/n.d. [ce]nturia/Calvi[ni] vixit/anno[s] XX/ Romus qui mili/tat in nume/rum Dalmat[a]rum 7 (centuria) VI.

⁸ For the Principate the accomodable space for the officers, centurions and other non-commissioned officers appears clearly difined within the space of a barrack; von Breeze-Dobson 1974, p. 13—19; Nash-Williams 1969, p. 163, Petrikovits 1975, p. 43—49; 59—66 but there are no evident proofs at Drobeta unless the 4 × 4 m. rooms were destined to be occupied by the command personel. It is worth-noting on the other hand that one cannot demonstrate that within the rooms soldiers were accomodated in overlapped beds, a fact which would have led to the doubling of the forces in such a space, 14 or 16 respectively and, implicitly, the size of the unit, 600 men in the case of the *cuneus* and 528 men in the case of the infantry unit.

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ABBREVIATIONS AND BIBLIOGRAPHY

Anastasescu 1971 I. Anastasescu, *Contribuții la topografia Drobetei civile pe baza unor noi descoperiri*, in *Sesiunea de comunicări științifice a muzeelor de istorie* 1964, I, București; p. 425—232

- Bărcăcilă 1932 Al. Bărcăcilă, *Drobeta, azi Turnu Severin. Așezarea dacică, podul lui Traian, castrul și orașul roman*, București 1932
- Bărcăcilă 1935 Al. Bărcăcilă, *Indicațiuni și începuturi de noi cercetări arheologice. Ilovat, Drobeta și Drajna de Sus*, in *BCMI* XXVIII, 84; p. 3—6
- Bărcăcilă 1937 Al. Bărcăcilă, *Cetatea Severinului. Început de cercetări arheologice*, in *BCMI* XXX, 94, p. 149—165.
- Bărcăcilă 1938 Al. Bărcăcilă, *Un ville daco-romaine: Drobeta*, *L'Archéologie en Roumanie*, Bucharest 1938
- Bărcăcilă 1939 Al. Bărcăcilă, *Cetatea Severinului*, in *BCMI* XXXII, 100, p. 74—88
- Benea 1977 D. Benea, *Câteva considerații cu privire la topografia Drobetei în secolele II—III*, in *ActaMN* 14, 1977, p. 133—145.
- Beševliev 1952 V. Beševliev, *Epigrafski Prinosi*, Sofia 1952
- Bidwell 1991 P. Bidwell, *Later Roman barracks in Britain*, in *Limes* 15 Exeter, p. 9—15.
- Bidwell — Speak 1994 P. Bidwell, S. C. Speak, *Excavations at South Shields Roman fort*, I (Soc. Antiq. Newcastle upon Tyne Mon 4), Newcastle upon Tyne 1994
- Breeze — Dobson 1974 D. J. Breeze, B. Dobson, *Fort Types as a Guide to Garrison: A reconsideration*, in *Limes* 8 Cardiff, p. 13—19
- Breeze — Dobson D. J. Breeze, B. Dobson, *Hadrian's Wall* 3rd edition, London 1987
- Brothers 1972 A. J. Brothers, *Diocletian's palace at Split*, Greece and Rome XIX, Oxford, p. 175—186
- Carrol-Spielecke 1993 M. Carrol-Spielecke, *Das Römische Militärlager Divitia in Köln-Deutz*, in *Kölner Jahrbuch* 26, 1993, p. 321—444
- Crema 1959 L. Crema, *Enciclopedia Classica. Sezione III. Archeologia e storia dell'arte classica*, XII. Archeologia (Arte romana) a cura di Paola E. Arias, tomo I, *L'Architettura Romane*, Torino 1959
- Davidescu 1974 M. Davidescu, *Drobeta romano-bizantină în istoriografia românească și străină I*, in *Drobeta* 1, 1974, p. 187—195
- Davidescu 1976 a M. Davidescu, *Drobeta romano-bizantină în istoriografia românească și străină II*, in *Drobeta* 2, 1976, p. 81—92.
- Davidescu 1976 b M. Davidescu, *Drobeta în secolele 4—6 e.n.*, in *RMMIM*, 1976, p. 39—49
- Davidescu 1980 M. Davidescu, *Drobeta în secolele 1—7 e.n.*, Craiova 1980.
- Davidescu — Tudor 1976 M. Davidescu, D. Tudor, *Portul roman de la Drobeta*, in *Drobeta* 2, 1976, p. 6—40
- Demetrescu 1883 V. Demetrescu, *Istoria orașului Severin*, Turnu Severin 1983
- Duval 1961 N. Duval, *Le palais de Diocletien a Spalato à la lumière des récents découvertes*, in *BSAF*, 1961, p. 76—117
- Dyggve — Vettters 1966 E. Dyggve, H. Vettters, *Mogorjelo*, Wien 1966
- Fellmann 1976 R. Fellmann, *Le Camp de Diocletien à Palmyre et l'architecture militaire du Bas Empire*, in *Mélanges D'Histoire Ancienne et d'Architecture offerts à Paul Collart* (Cahiers d'Archéologie no. 5), Lausanne 1976, p. 173—191
- Fellmann 1979 R. Fellmann, *Der Diocletianspalast von Split im Rahmen der spätromischen Militärarchitektur*, in *Antike Welt*, X/2, 1979, p. 47—55
- Florescu 1993 Gr. Florescu, *Castrul roman Drobeta (Turnu Severin). Cercetări și săpături arheologice din 1931*, in *RIR* III, 1933, p. 32—53.
- Florescu 1964 R. Florescu, *Problema originilor bazilicii creștine și principia fazei târzii a castrului Drobeta*, in *Apulum* 5, 1964, p. 573—589

- Florescu 1965 R. Florescu, *Problema originilor bazilicii creștine și principia fa-zei târzii a castrului Drobeta*, in *Apulum* 6, 1965, p. 573—590
- Florescu 1967 R. Florescu, *Les phases de construction du castrum Drobeta — Turnu Severin*, in *Limes* 7, Tel Aviv, p. 144—151
- Florescu 1971 R. Florescu, *Descoperiri noi de la Drobeta (Turnu Severin) și reforma militară din a doua jumătate a secolului al III-lea e.n.*, in *Seșiunea de comunicări științifice a muzeelor de istorie* 1964, I, București, 1964, p. 433—439
- Grosse 1923 R. Grosse, *Römische Militärgeschichte von Gallienus bis zum Beginn der Byzantinischen Themenverfassung*, Berlin 1923
- Harl 1986 O. Harl, *Kasernen und Sonderbauten der 1 Kohorte im Legionslager Vin-dobona*, in *Limes* 13 Aalen, p. 322—327
- Hoffmann 1970 D. Hoffmann, *Das Spätromische Bewegungsheer und die Notitia Dignitatum*, Dusseldorf (Epigraphische Studien 1/1, 2), Bonn 1970
- Jones 1964 A. H. M. Jones, *The Later Roman Empire*, I—II—III, London 1964
- Kowalski 1994 S. P. Kowalski, *The Praetorium of the camp Diocletian in Palmyra*, in *Studia Palmyrenskie* IX, 19, 94, 39—70
- Lambrino 1941 S. Lambrino, *Bisexarchus*, in *RIR* X, 1941, p. 333—339
- Maekensen 1994 M. Mackensen, *Die Innenbebauung und der Nordvorbau des Spätromischen Kastells Abusina/Eining*, in *Germania* 72, 1994, p. 479—513
- Marsigli 1774 L. F. Marsigli, *Description du Danube*, II, La Haye 1774
- Michalowski 1968 K. Michalowski, *Palmyra*, Wien-München 1968
- Nash-Williams 1969 V. E. Nash-Williams, *The Roman Frontier in Wales*, 2nd re-vised Edition by Michael Jarrett, Cardiff 1969
- Oldenstein 1986 J. Oldenstein, *Das spätromische Kastell von Alzey*, in *Limes* 13 Aalen, p. 235—244
- Parker 1989 S. Th. Parker, *Preliminary report on the 1989 Season of the Limes Arabicus Project* (off print), p. 117—154
- Tocilescu 1877 Gr. C. Tocilescu, *Raportul general al săpăturilor făcute castrului roman din Turnu Severin*, mss BAR
- Tudor 1965 D. Tudor, *Drobeta*, București 1965
- Tudor 1978 D. Tudor, *Oltenia romană*, 4th edition, București 1978
- Várady 1961 L. Várady, *New Evidences on some problems of the Roman Military Organization*, in *Acta Antiqua* IX, 1961, p. 333—396
- Vasić 1991 M. Vasić, *L'architecture à l'intérieure des camps romains des Portes de Fer au IV-ème et V-ème siècle*, in *Limes* 15 Exeter, p. 308—310
- Vetters 1967 H. Vetters, *Zum Bautypus Mogorjelo*, in *Festschrift für Fr. Eeicher*, Wien, 1967, p. 138 sq
- Petrikovičs 1971 H. von Petrikovičs, *Fortifications in the North-Western Roman Empire from the Third to the Fifth Centuries A.D.*, in *JRS* XLI, 1971, p. 178—219
- Petrikovičs 1975 H. von Petrikovičs, *Die Innenbauten romischer Legionlager wäh-rend der Prinzipat, in Abhandlungen der Rheinisch Westfälischen Aka-demie der Wissenschaften* 56, Bonn 1975
- Schnurbein — Kohler 1989 S. von Schnurbein, H. J. Kohler, *Der neue Plan des valentinianischen Kastells Alt Ripa (Altrip)*, in *BRGK* 70, 1989, p. 508—526
- Schnurbein 1991 S. von Schnurbein, *Der neue Plan von Altrip*, in *Limes* 15 Exeter, p. 208—209

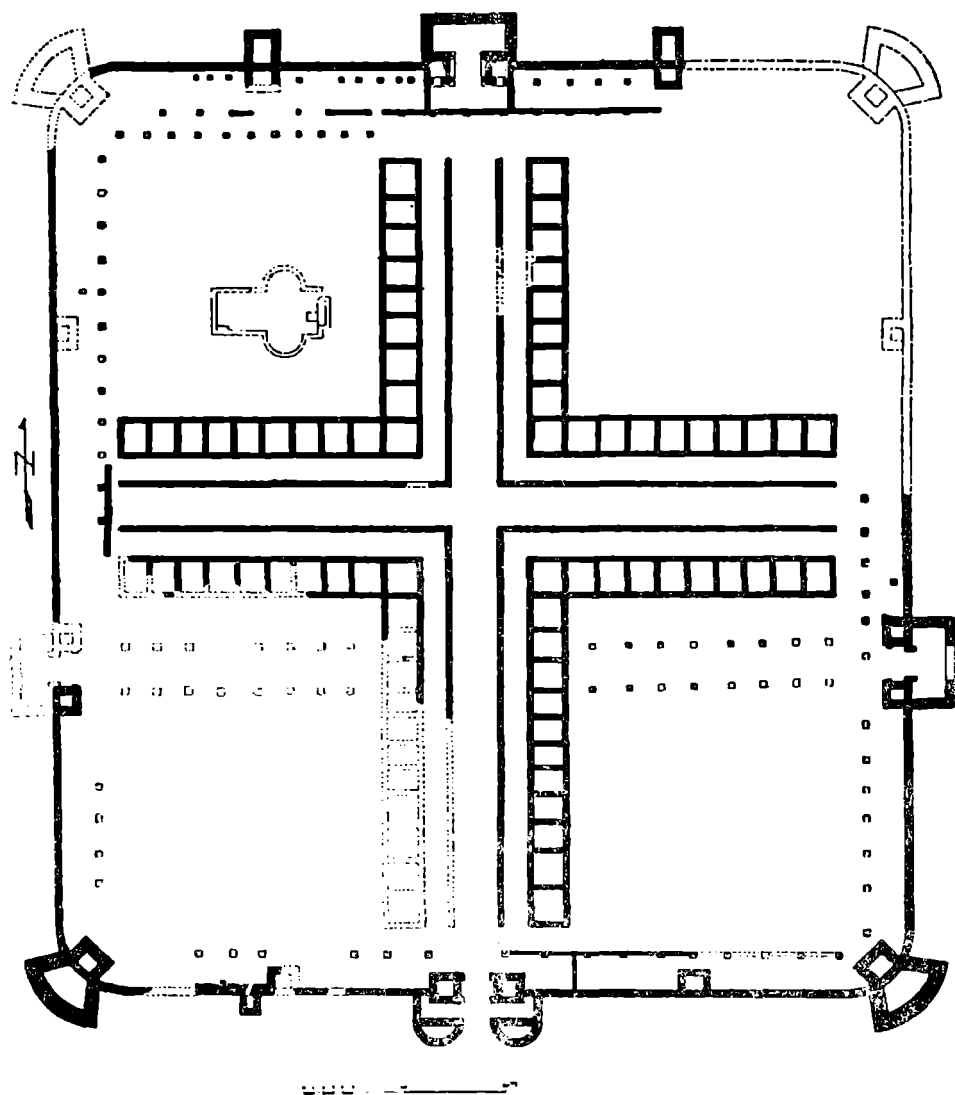


Fig. 1. The 4th c. Drobeta Roman fort

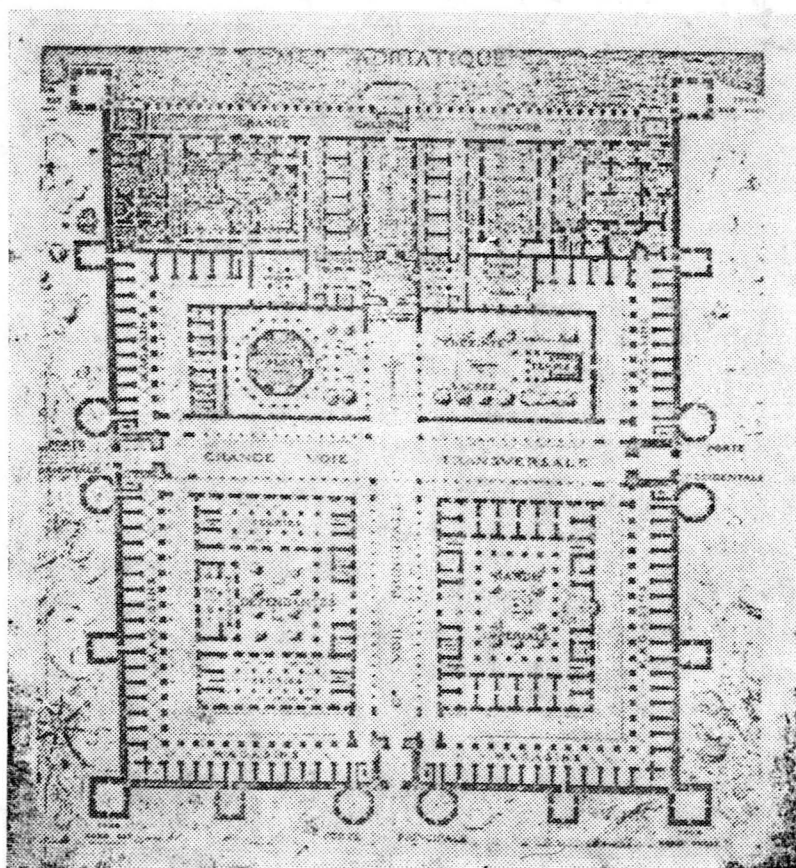


Fig. 2a. The Diocletian's palace in Spalato (after Crema 1959 fl. 810)

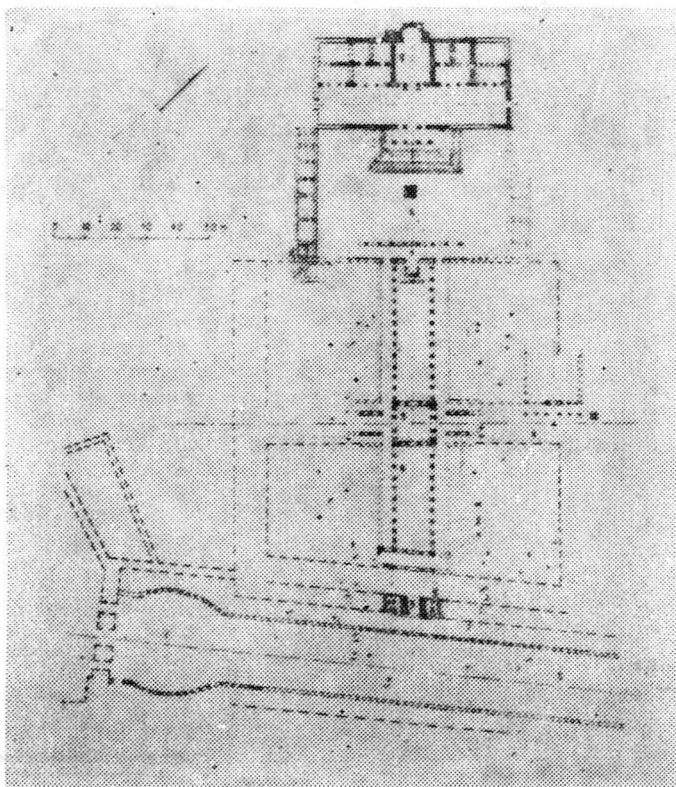


Fig. 2b. The principia in the Palmyra fortress (after *Michalowski* 1968, p. 24)

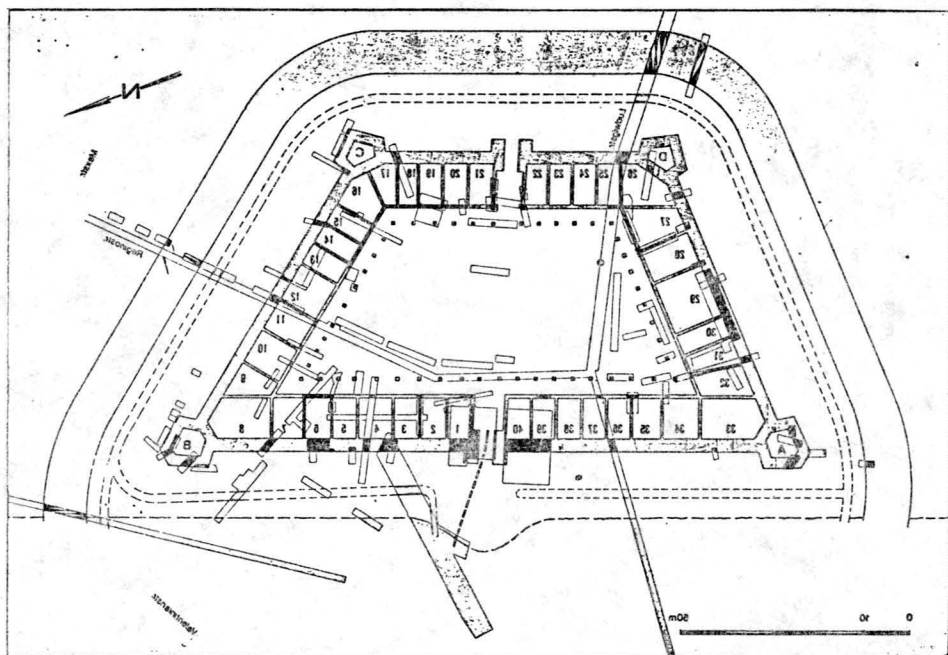


Fig. 3a. The 4th c. Altaripa (Altrip) Roman fort (after von Schnurbein 1991, fig. 135.)

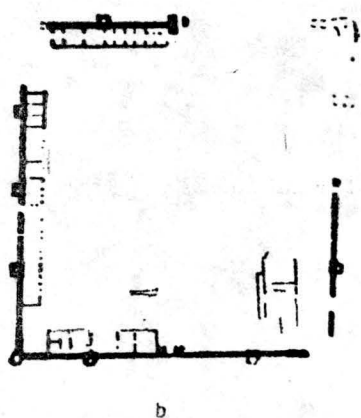


Fig. 3b. The 4th c. Alzey road-fort (after von Petrikovits 1971, p. 202, fig. 31, 4)

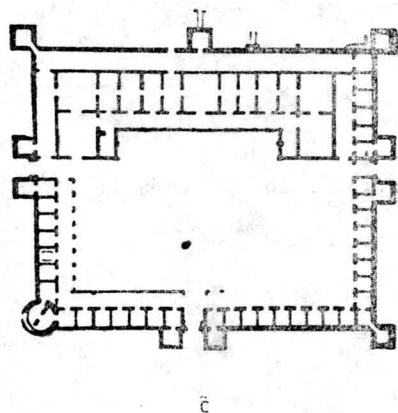


Fig. 3c. The Mogorjelo Roman fust (after Crema 1959, fig. 817)

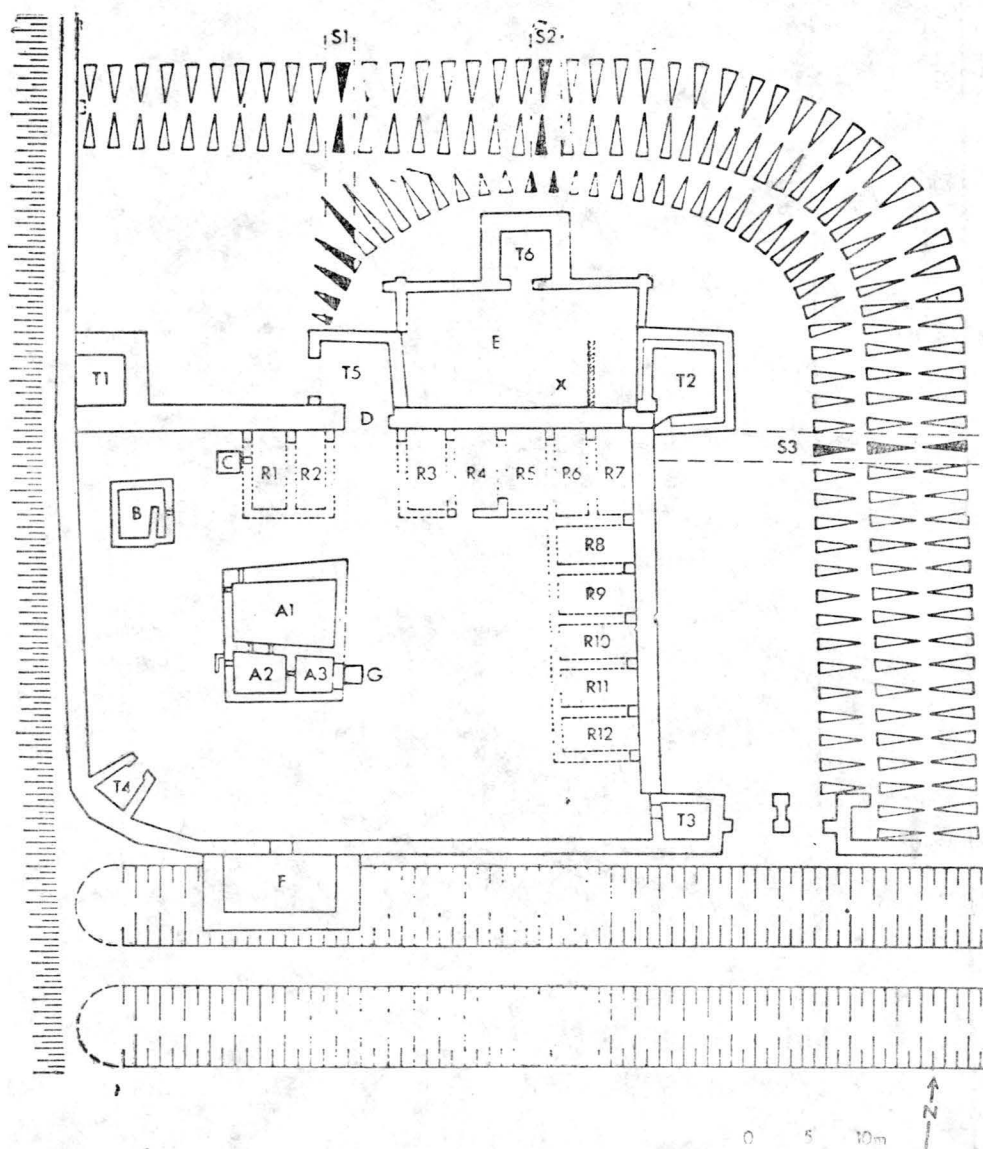


Fig. 4. The 4th c. Abusina (Eining) Roman fortlet (after Mackensen 1994, fig. 9)

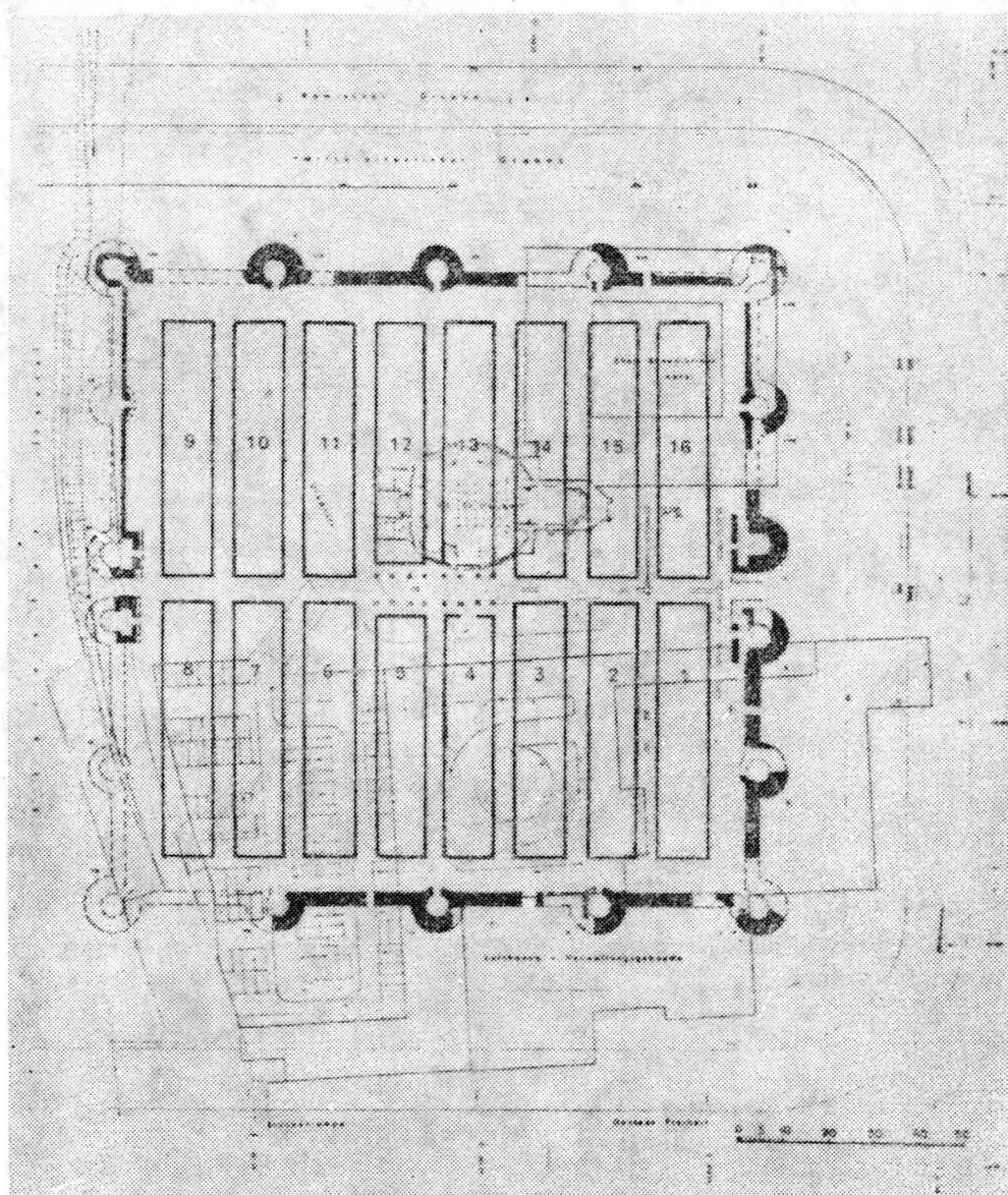


Fig. 5. The 4 th c. Divitia (Deutz) Roman fort (after *Carroll-Spielecke* 1993, fig. 1)

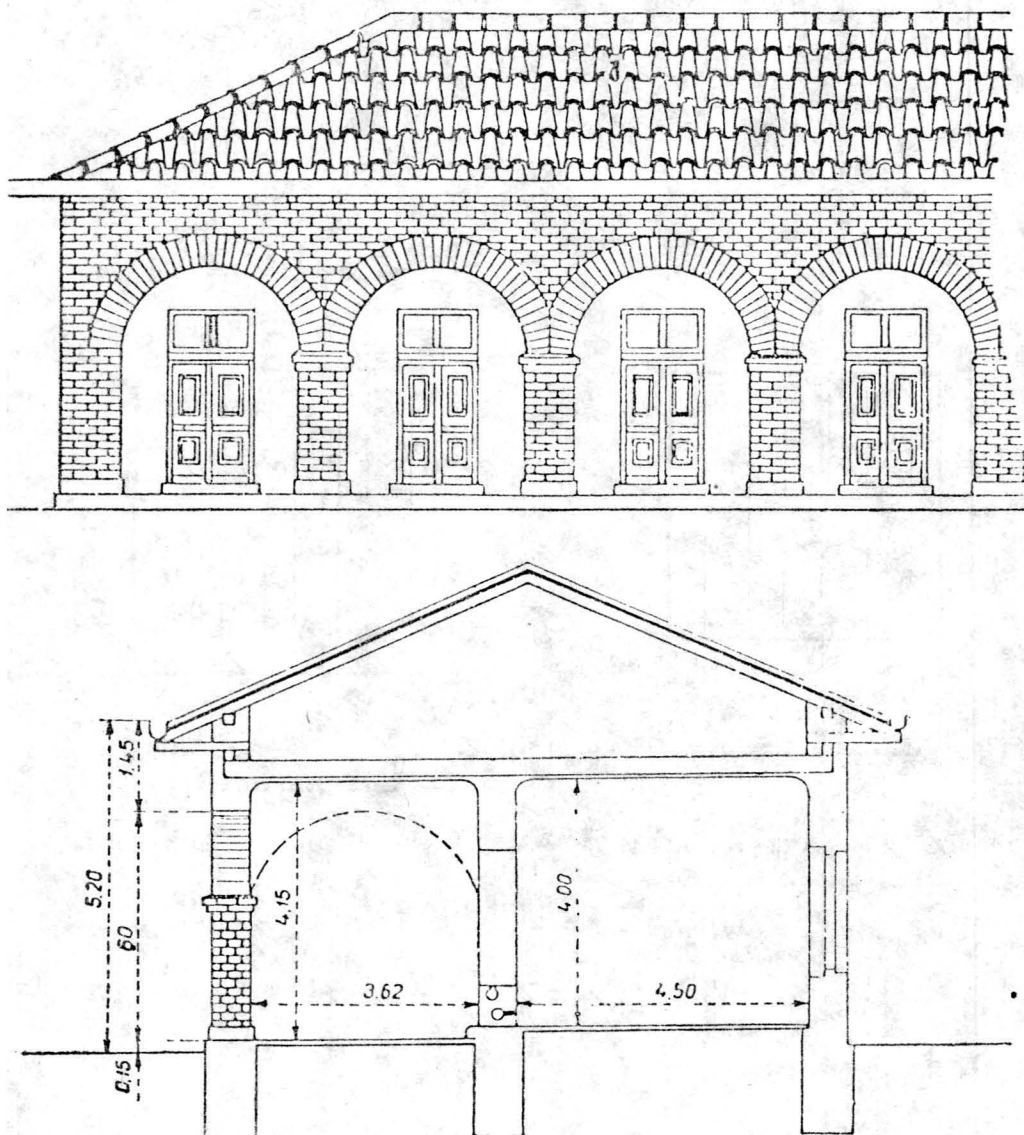
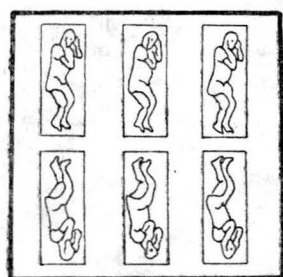
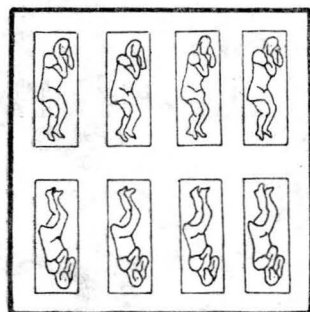


Fig. 6. The barracks within the Drobeta Roman fort as reconstituted by Polonic (after Tudor 1978, p. 437, fig. 138)



0 1 2 3m

A horizontal scale bar with markings at 0, 1, 2, and 3 meters.

0 1 2 3m

A horizontal scale bar with markings at 0, 1, 2, and 3 meters.

Fig. 7. A view on the accomodation of the soldiers inside the rooms in the Drobete fort