

Thraco-Getic fortifications in Middle Dniester region. Sites from Saharna micro-zone¹

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Grație condițiilor fizico-geografice prielnice, partea de sud a regiunii Nistrului Mijlociu a servit din cele mai vechi timpuri drept loc de trai pentru comunitățile umane, fapt documentat prin numeroase situri arheologice (fig. 1). Însă, o adevărată „explozie demografică” este atestată în așa-numita perioadă traco-getică, de când în acest spațiu sunt cunoscute vestigiile a cca 39 fortificații și 63 așezări deschise (fig. 2). În urma cartării s-a observat că, de regulă, ele sunt grupate în „aglomerări/concentrări”, constituite din câteva fortificații și un număr variabil de așezări civile. În regiunea de sud a Nistrului Mijlociu astfel de „aglomerări” de situri pot fi conturate în bazinele râurilor Ciorna și Cogâlnic, precum și pe malul drept al Nistrului, în microzonele Horodiște-Țipova și Saharna.

Dintre acestea, cea mai intens studiată în ultimii ani este „aglomerarea” de situri din microzona Saharna, din care, la momentul actual, sunt cunoscute 13 fortificații (Saharna Mare, Saharna Mică, Saharna „La Șanț”, Saharna „La Vile” etc.) și 10 așezări civile (fig. 7).

Ca urmare a cercetărilor perieghetice și a investigațiilor arheologice s-a stabilit că un rol important în spațiul menționat a avut fortificația de la Saharna Mare, care se evidențiază prin poziția strategică, suprafață (cca 6 ha), complexitatea sistemului defensiv, precum și prin descoperirile din incintă. Acestea permit să presupunem că cetatea de la Saharna Mare a funcționat ca un centru economic, administrativ, social-politic și religios.

The southern part of the Dniester Middle region comprises an area of about 15-20 km, which is located on the right bank and partly on the left bank of the Dniester River, between the localities of Vertiujeni (47°

59° 36" North, 28° 32' 24" East) in the north and Țipova (47° 36' 18" North, 28° 58' 46" East) in the south.

The territory of the right bank is part of the Dniester Plateau and the left bank area represents south-western outskirts of the Podolian Plateau.

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The Dniester Plateau in this region has a moderate relief with absolute heights of 250-347 m above sea level, broken by a system of narrow valleys and ravines, sometimes in form of a gorge (density of fragmentation is 1.9-2.1 km/km²) (Рымбу 1982, 12, 14; Boboc 2009, 164).

The Formation of contemporary landscape in the central region of the Dniester River basin began in Middle Pliocene, with the retreat of sea water caused by the general rise of the earth's crust in this area (about 5 mm/year). During the same period there appeared alluvial networks and started vast accumulations of alluvium on relatively large surfaces. Subsequent lifting of land, without causing plicative or disjunctive tectonic structures, occurred impulsively on a regional scale, forming a series of alluvial terraces in major rivers. The rise of the land surface is confirmed by the morphological character of the valleys of the La-Vale-Rezina, the Saharna and other small rivers. In the area of the lower reaches, near the Dniester River, these are represented by narrow canyons with depths of about 15-50 m. And as a result of the tectonic movements the right bank of the Dniester in the region became very steep (Ciubotaru 2014, 11-12). The Dniester terraces are shaped in the form of steps with a height of 5-10 m, where a process of selective erosion carved long horizontal caves and niches (Ciubotaru 2014, 12). The hills and banks of the river valleys are covered with loamy soils, ashen-gray soils, and chernozem deposited on reef massifs – deposits of clay, sand, limestone, and other rocks. They were formed in steppe conditions under deciduous forests, characterized by the presence of oak, linden, maple, beech, etc. Gray soils contain about 10% humus and have grain structure.

Chernozems, also formed under the trees and are cumulative, with high humus content, well structured and loose. These soils have a high level of fertility and represent the main natural resource of this area (Ursu 2006, 160-175; Begu et al. 2006, 112-130).

Thanks to favorable physical and geographical conditions, the southern part of the Middle Dniester region since ancient times has served as a place to live for human communities, what is confirmed by numerous archaeological sites (Bubulici 1993; Haheu 1993; Levițki 1993). But a true increase of population in this space is attested during the Iron Age.

Thus, to the Cozia-Saharna culture (late 11th c. - early 8th c. BC), which is considered one of the earliest Iron Age cultures in this region (Кашуба 2011, 53-59; Кашуба 2013, 126-127), now can be attributed about 50 sites (Кашуба 2000, 340-352; Zanoci, Băț 2011, 16-17, table 1), including: two fortifications, 39 unfortified settlements and nine cemeteries (fig. 1) . For the next period – the Basarabi-Șoldănești culture (the 8th c. - early 7th c. BC) – the number of known archaeological monuments is much lower – 12 (fig. 1; Zanoci, Băț 2011, 17, table 1), consisting of 10 settlements and two cemeteries.

Since the so-called Thraco-Getic period (the 7th/6th-3rd BC) the number of archaeological sites in the southern part of the Middle Dniester basin increases significantly, reaching a peak in the 4th - 3rd centuries BC, when there were 39 fortifications and about 63 settlements (fig. 2; Лапушнян, Никулицэ, Романовская 1974, 41-46; Kašuba, Haheu, Levițki 2000, 119-130; Arnăut 2003, 183-279; Zanoci, Băț 2011, 17-19, table 1).

After their mapping (fig. 2) it was observed that as a rule they are grouped into “agglomerations/clusters” consisting of several fortifications and a variable number of open settlements. In the southern region of the Middle Dniester such “agglomerations” of sites can be specified in basins of the Ciorna and the Cogâlnic rivers and on the right bank of the Dniester in micro-zones of Horodiște-Țipova and Saharna.

Among these “agglomerations” the most intensively studied in recent years is the “agglomeration” of sites from the Saharna microzone², where at present there are known 13 fortifications and 10 not fortified settlements³ (fig. 1, 2, 4, 6, 7).

Starting from the idea that fortifications have played an important role in the life of human communities in this period of time, they were given special attention, while settlements remain to be known only as a result of surface investigation.

The degree of research of the fortifications also is different. Some, such as Saharna Mare, Saharna Mică, Saharna “La Șanț”, Saharna “La Revichin”, and Ofatiinți were researched through archaeological investigations. Others (Saharna “La Șanț” I, Saharna “La Șanț” II, Saharna “La Vile”, Buciușca) were subject to smaller-scale surveys. And those of Stohnaia III, Stohnaia IV,

Saharna “Dealul Grimidon”, and Saharna “Hulboaca” remain to be known only from surface investigations.

In the investigated region, in terms of topography (fig. 4, 6, 7) it was observed that the majority of fortified sites from this period are grouped on the banks of the three canyons going from the Dniester river bed to the inland⁴. These canyons made the connection between the river and the related territories.

In the central part of the Saharna micro-region there is a deep canyon (“Valea Crac”), which splits in its western side, forming an interfluvium in which the fortification of Saharna Mare was located. On the south side of the canyon the fortified sites of Saharna “La Șanț”, Saharna “La Șanț” I and Saharna “La Șanț” II were built, and on the north side – Saharna Mică, Saharna “Dealul Grimidon” and Saharna “La Vile”.

At a distance of about 3.5 km north of the “Valea Crac”, on the southern outskirts of the Stohnaia village there is another canyon, on whose sides the fortifications of Stohnaia III (in the south side) and Stohnaia IV (in the north side) were located.

At about 4.5 km south of the “Valea Crac”, north of the Buciușca village there is the third canyon. On its sides the fortresses of Saharna “Hulboaca” (in the north side) and Buciușca (in the south side) were located.

² The investigated area is a strip about 2.0 to 4.5 km wide and about 8.5 km long, located on the right bank of the Dniester, between the villages of Stohnaia (47° 43' 37" North, 28° 57' 53" East) and Buciușca (47° 38' 55" North, 28° 59' 35" East). Added to this is a small portion of land on the left bank of the Dniester, where the fortification of Ofatiinți is located.

³ It is possible that the number of civilian settlements have been higher. However, given that the Saharna micro-zone is mostly covered by forests, the discovery of open settlements here is more difficult.

⁴ Exceptions are only two fortresses, which are located directly on the high and steep banks of the Dniester – Saharna “La Revichin” (on the right bank) and Ofatiinți (on the left bank).

Cozia-Saharna

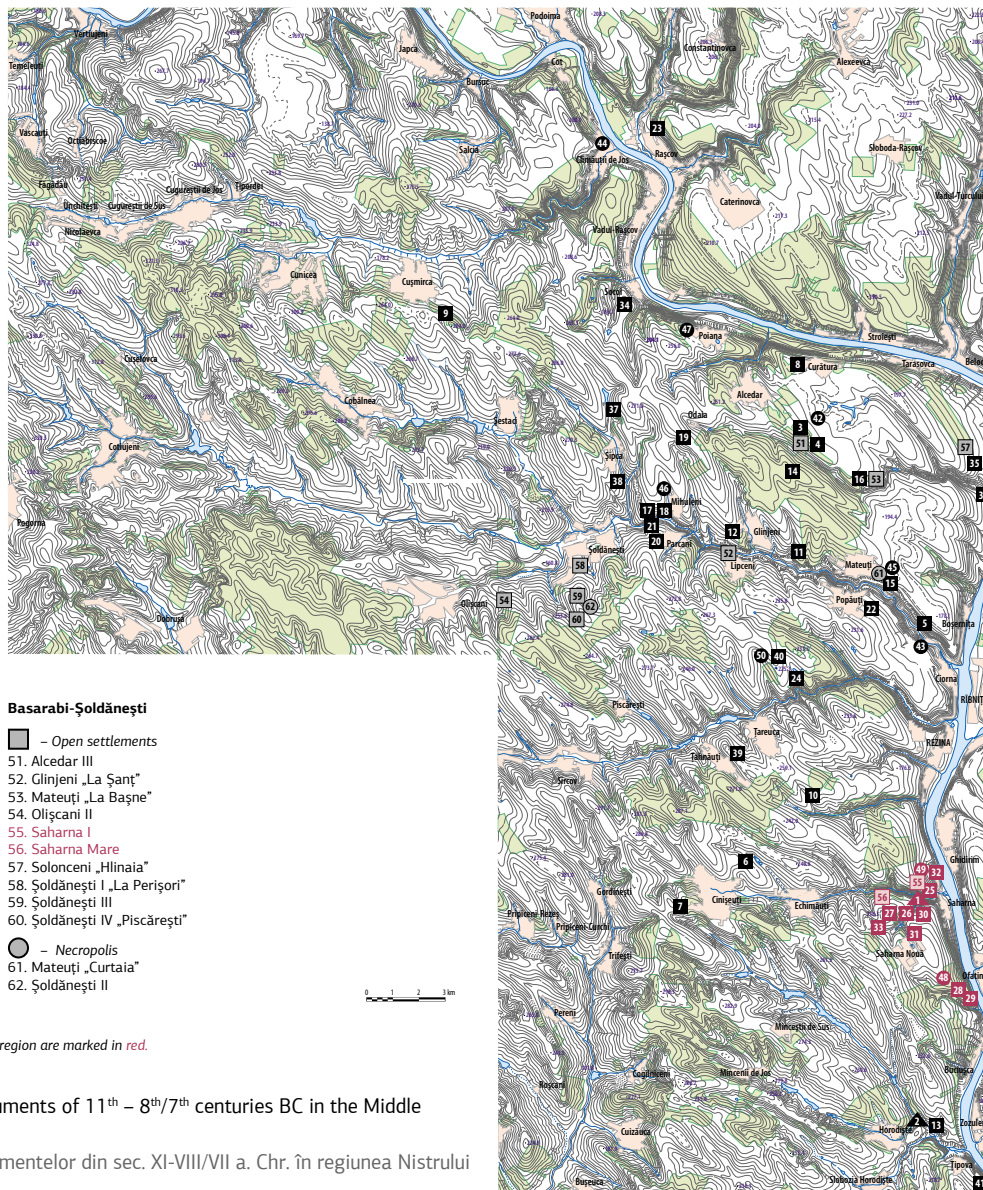
▲ – Fortifications

1. Saharna Mare
2. Horodiște „La Șanț”

■ – Open settlements

3. Alcedar III
4. Alcedar „La Cordon”
5. Ciorna I
6. Cinișeuți I
7. Cinișeuți II
8. Curatura II
9. Cușmirca
10. Echimăuți
11. Glinjeni V
12. Glinjeni „La Șanț”
13. Horodiște „Groapa Turcului”
14. Mateuți
15. Mateuți „Curtaia” I
16. Mateuți „La Bașne”
17. Mihuleni I
18. Mihuleni II
19. Odaia
20. Parcani I
21. Parcani II
22. Popăuți II
23. Rașcov „Mlini”
24. Stohnaia I
25. Saharna I
26. Saharna „Budei”
27. Saharna Mare/„Dealul Mănăstirii”

28. Saharna „Gura Hulboacei”
 29. Saharna „Hulboaca”
 30. Saharna „La Șanț”
 31. Saharna „Rude”
 32. Saharna „Țiglău”
 33. Saharna „Valea de Mijloc”
 34. Socol „Craina”
 35. Solonceni „Hlinaia”
 36. Solonceni „La Ursari”
 37. Șipca I
 38. Șipca II
 39. Țahnăuți
 40. Țareuca
 41. Țipova II
- – Necropolis
42. Alcedar
 43. Ciorna
 44. Climăuții de Jos
 45. Mateuți
 46. Mihuleni
 47. Poiana
 48. Saharna „Gura Hulboacei”
 49. Saharna „Țiglău”
 50. Țareuca

**Basarabi-Șoldănești**

■ – Open settlements

51. Alcedar III
 52. Glinjeni „La Șanț”
 53. Mateuți „La Bașne”
 54. Olișcani II
 55. Saharna I
 56. Saharna Mare
 57. Solonceni „Hlinaia”
 58. Șoldănești I „La Perișori”
 59. Șoldănești III
 60. Șoldănești IV „Piscărești”
- – Necropolis
61. Mateuți „Curtaia”
 62. Șoldănești II

Note: The sites from Saharna micro-region are marked in red.

Fig. 1. Spreading of monuments of 11th – 8th/7th centuries BC in the Middle Dniester Region.

Fig. 1. Răspândirea monumentelor din sec. XI-VIII/VII a. Chr. în regiunea Nistrului Mijlociu.

▲ – Fortifications

1. Alcedar „La Cordon”
2. Buciușca
3. Buciușca II
4. Buciușca III
5. Caterinovca
6. Coğălniceni
7. Cuncea
8. Curătura
9. Dobrușa
10. Glinjeni „La Lacuri”
11. Glinjeni „La Șanț”
12. Horodiște „La Șanț”
13. Horodiște II
14. Horodiște „La Cot”
15. Japca
16. Mateuți
17. Ofăținți
18. Olișcani
19. Parcani
20. Rașcov
21. Rezina
22. Stohnaia I
23. Stohnaia III
24. Stohnaia IV
25. Saharna „Hulboaca”
26. Saharna „La Șanț”
27. Saharna „La Șanț” I
28. Saharna „La Șanț” II
29. Saharna Mare
30. Saharna Mică
31. Saharna „Dealul Grimidon”
32. Saharna „La Vile”
33. Saharna „La Revichin”
34. Stroiești
35. Temeleuți
36. Țahnăuți
37. Țareuca
38. Țipova III
39. Vertiujeni

■ – Open settlements

40. Alcedar
41. Bușeuca I
42. Bușeuca II
43. Buciușca IV
44. Buciușca V
45. Coğălniceni I
46. Coğălniceni II
47. Coğălniceni III
48. Coğălniceni IV
49. Coğălniceni V
50. Coğălniceni VI
51. Coğălniceni VII
52. Coğălniceni VIII
53. Coğălniceni IX
54. Coğălniceni X
55. Curătura IIIa
56. Curătura IIb
57. Curătura IIc
58. Cușmirca I
59. Cușmirca II
60. Cușmirca III
61. Cușmirca IV
62. Ghiduleni I
63. Glinjeni
64. Glinjeni V
65. Lipcenii IV
66. Lipcenii „Râpa Zanova”
67. Mateuți „La Bașne”
68. Mihuleni I
69. Mihuleni II
70. Mihuleni VII
71. Odaia
72. Olișcani II
73. Olișcani III
74. Parcani I
75. Parcani II
76. Pereni
77. Poiana III
78. Poiana IV
79. Poiana V
80. Poiana VI
81. Poiana VII
82. Poiana VIII
83. Popăuți „Hlinaia”
84. Popăuți I
85. Popăuți II
86. Rașcov Villa
87. Saharna „Budei”
88. Saharna „Gura Hulboacei”
89. Saharna „La Revichin” I
90. Saharna „Lesnoe”
91. Saharna Mică I
92. Saharna Nouă
93. Saharna „Rude”
94. Saharna „Valea Furnicar”
95. Saharna „Valea de Mijloc”
97. Socol „Craina”
98. Soloncenii „Hlinaia”
98. Stohnaia V
99. Șestaci
100. Șipca I
101. Șoldănești I „La Perșori”
102. Șoldănești IV „Piscărești”

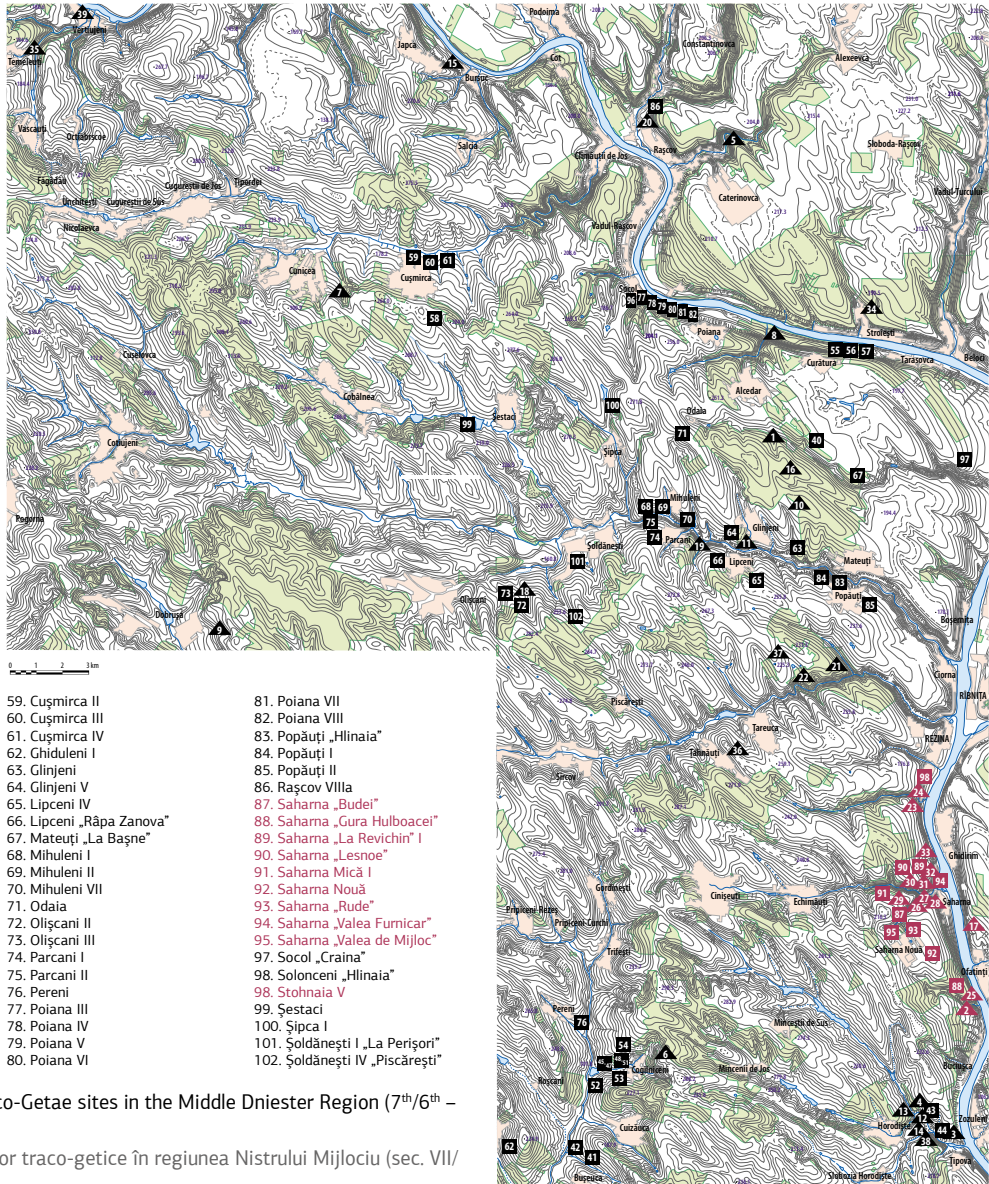


Fig. 2. Spreading of Thraco-Getae sites in the Middle Dniester Region (7th/6th – 3rd centuries BC).

Fig. 2. Răspândirea siturilor traco-getice în regiunea Nistrului Mijlociu (sec. VII/VI-III a. Chr.).

Fortified sites in the central part of the Saharna micro-zone

The fortification of **Saharna Mare** (site coordinates: 47° 41' 37.3000" North, 28° 57' 27.7600" East) is located about 1 km southwest of the recent Saharna village and occupies the central and eastern part of the interfluvium of approximately trapezoidal shape, which is part of the high terrace (altitude of about 130 m from the riverbed) of the right Dniester bank (fig. 4, 6, 7). The northern, eastern and southern sides of the interfluvium are marked by high steep banks of the gorges that unite in the western part of Saharna village.

The first archaeological investigations were conducted by G.D. Smirnov in 1940s (Смирнов 1949a, 93-95). After a break of more than five decades, in 2001 archaeological investigations were resumed by employees of the scientific laboratory "Thracology" of the Moldova State University, and continue until these days. Thus, during 2001-2014 excavations were conducted on an area of 2202 m², being studied defensive system, as well as dwelling, household and

worship complexes. Also there were found rich and varied archaeological materials⁵.

As a result of archaeological research it was determined, that the first traces of habitation in the Saharna Mare interfluvium dates back to the end of the 12th c. - 11th c. BC, when there existed an open settlement (Zanoci, Niculiță, Băț 2013, 296-297, fig. 5/8-13). In the next phase, the Cozia-Saharna culture, in the south-west of the interfluvium there was a fortified citadel (Niculiță, Zanoci, Băț 2011, 226-236; Niculiță et al. 2012, 111-167). During early Thraco-Getic period (the 7th/6th -5th centuries BC) in the area of the interfluvium there existed a fortification defended from the north, east and south by steep slopes, and from the west it was defended by means of a palisade (Niculiță, Zanoci, Arnăuț 2008, 87-88, pl. 3, foto 11; Niculiță, Zanoci, Băț 2013, 297, fig. 9/4, 5).

⁵ The results of archaeological investigations have been published in journals and collections of papers in the Republic of Moldova (Niculiță, Zanoci, Arnăuț 2007, 27-62; Niculiță et al. 2012a; Niculiță et al. 2013) and abroad (Niculiță et al. 2010; Niculiță et al. 2011; Niculiță et al. 2012b; Niculiță, Zanoci, Băț 2011; Niculiță, Zanoci, Băț 2013), as well as in a monograph (Niculiță, Zanoci, Arnăuț 2008).



In the following 5th/4th-3rd centuries BC in the interfluvium another fortress was built, equipped with a circular defensive system that surrounded the inner area of about 6 ha. The defensive elements on the west side had a length of about 385 m and consisted of a “wall” with adjacent ditch and three bastions with their ditches, located at sides and center. Archaeological investigations revealed that the “wall” had a width of about 5.6 m and was built as a wooden framework, which consisted of four facings filled with earth, sand, gravel and stone. The ditch had a width of 15 m in the top part and 6 m at the bottom and a depth of about 3.2 m. Bastions on the west side were located in front of the entrance gate and had a semicircular shape with a diameter of about 70 m – the central one, and about 30 m – bastions from the flanks (fig. 3; 5/1). In the construction of the bastions there was used the same techniques as in the construction of the “wall” – wooden framework with filling (Niculiță, Zanoci, Arnăuț 2007, 27-62; Niculiță, Zanoci, Arnăuț 2008, 89-99, pl. 5-7, foto 13-26). On the north, east and south sides, which today are quite steep, the site was also defended with a “wall”, whose remains have been traced for a total length of about 650 m. In the eastern line this “wall”



Fig. 3. Saharna Mare. Orthophotomap (by <http://geoportal.md/>).

Fig. 3. Saharna Mare. Ortofotoplan (după <http://geoportal.md/>).

Fig. 4. Panoramic view of the Saharna micro-region from the southeast.

Fig. 4. Vedere panoramică dinspre sud-est a microzonei Saharna.



is wavy, forming eight bastions grouped in four at the northeast and southeast flanks. The Bastions have a semi-round shape 9-11 m in diameter and are located at a distance of 5-6 meters from each other; the distance between the groups of bastions is 34 m. Bastions were placed in this way to protect the flanks and the front of the fortress (fig. 3, 5/2). As a result of archaeological investigations it was established that in the construction of the “wall” and the bastions the same technique of building was used: wooden framework consisting of two facings filled with earth and stone. The width of the “wall” thus created varies from one part to another, but within the limits 1.1-1.6 m (Niculiță et al. 2013, 220-237, fig. 13, 14, 18, 20, 21, 23).

The results conducted inside the Thraco-Getic fortress from Saharna Mare there were discovered traces of five surface structures, three hearths, over 150 household pits, nine cult hearths and a rich and varied archaeological material represented by working tools, weapons, parts of harness, adornments, local and imported pottery (Niculiță, Zanoci, Arnăuț 2008, 102-140, fig. 92-159; Niculiță et al. 2011, 193-204; Niculiță et al. 2013, 257-286, fig. 45-69).

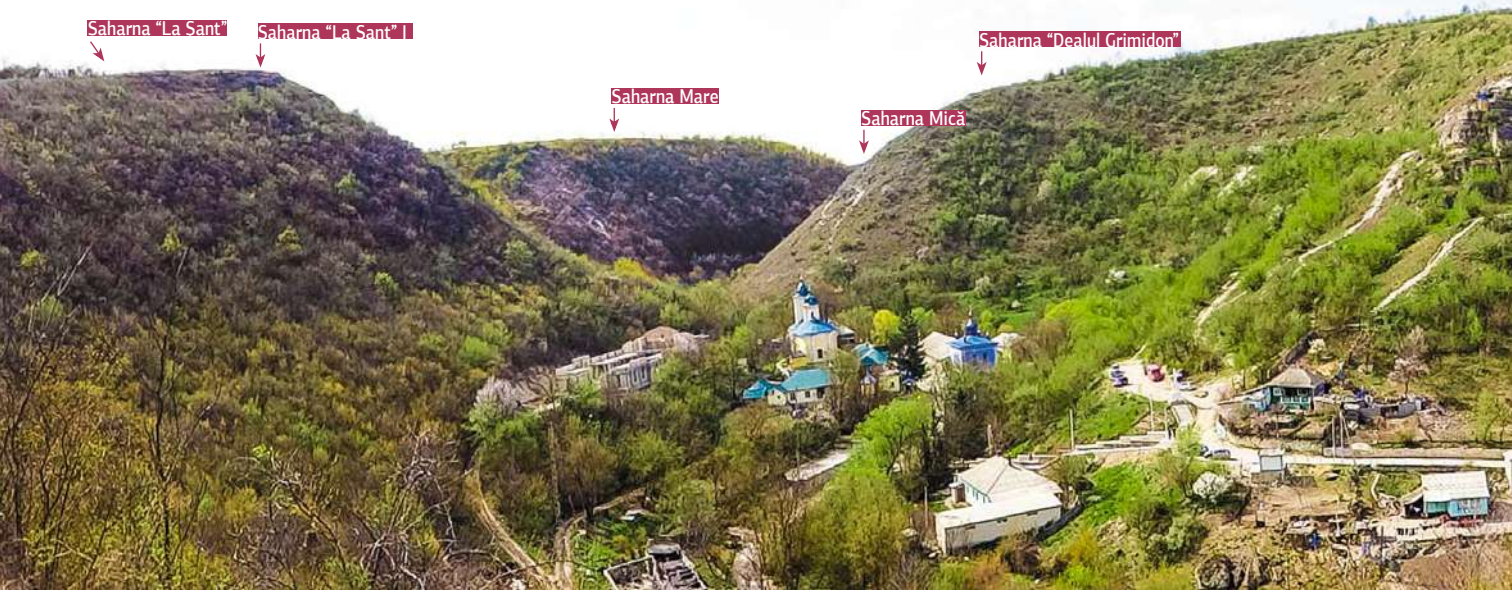
Saharna “La Sant”

Saharna “La Sant”

Saharna Mare

Saharna Mică

Saharna “Dealul Grimidon”





1



2

Fig. 5. Saharna Mare. 1 - The "rampart" and the central bastion; 2 - bastions in the northeast side.

Fig. 5. Saharna Mare. 1 - Valul și bastionul central; 2 - bastioanele din partea de nord-est.

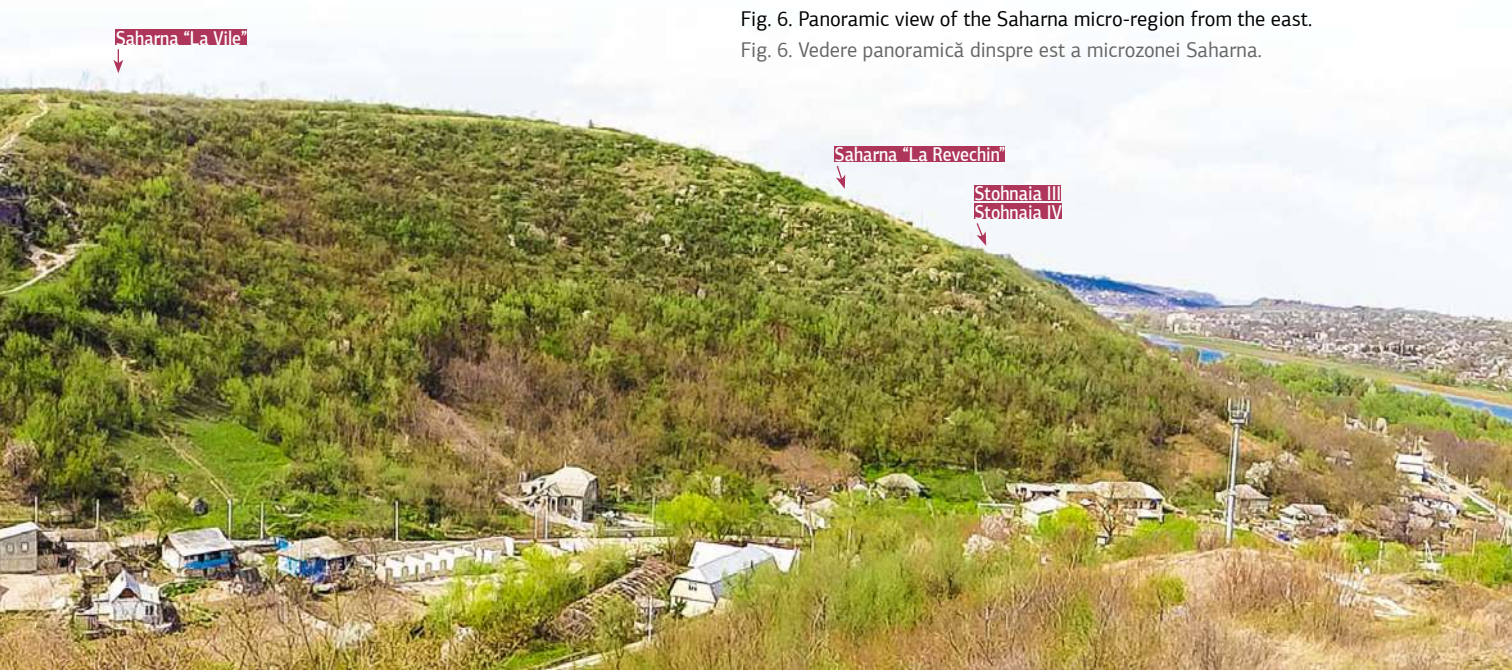


Fig. 6. Panoramic view of the Saharna micro-region from the east.

Fig. 6. Vedere panoramică dinspre est a microzonei Saharna.

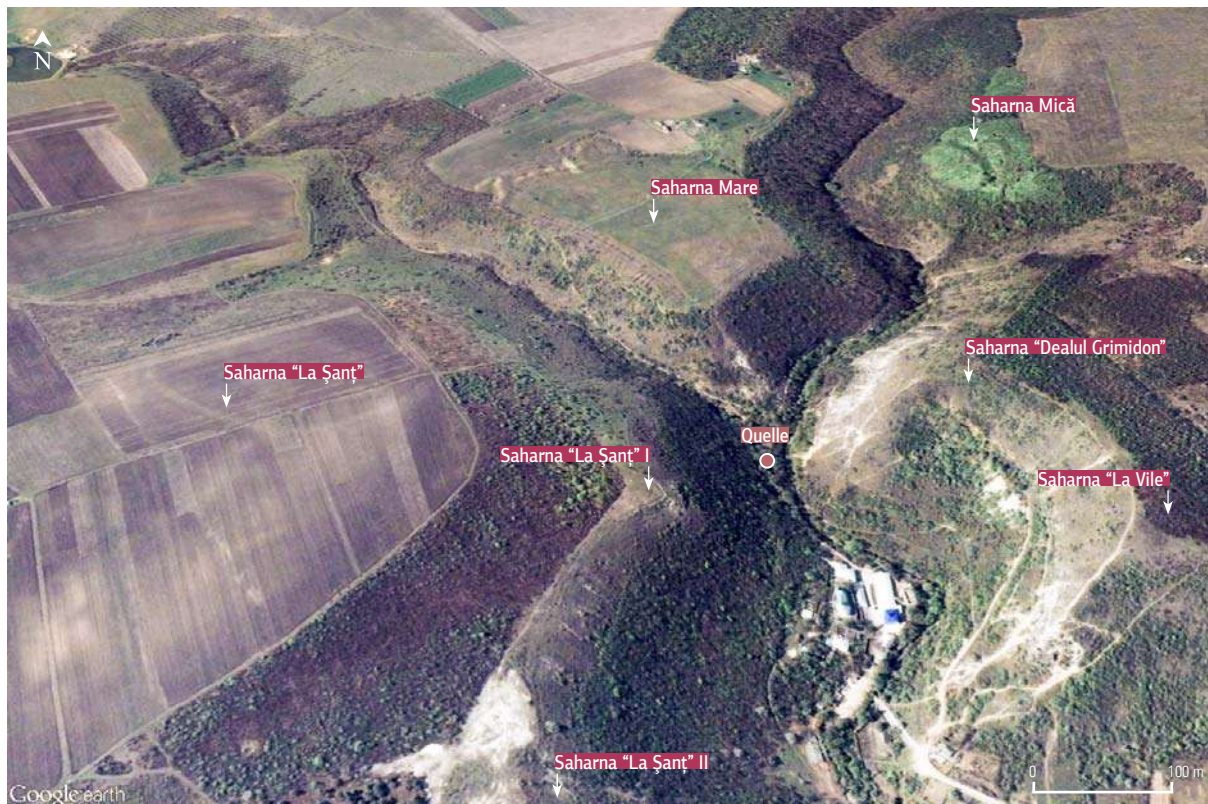


Fig. 7. Orthophotomap (2006) of the Saharna micro-region (by Google Earth Pro).

Fig. 7. Ortofotoplanul (2006) microzonei Saharna (după Google Earth Pro).

The **Saharna “La Şant”** site was located south of the Saharna Mare fortress, on a high and steep side of the canyon “Valea Crac” (fig. 7, 8/1), and consists of two inner areas. The first one⁶ (site coordinates: 47°

41' 29.9000" North, 28° 57' 39.2400" East) has semi-oval shape with the size of about 175×60 m (about 0.9 ha) and was defended on the north by a steep side of the canyon and on the west, east and south – with an artificial defense system (a “wall” with adjacent ditch) forming a semicircle. The research conducted in this defensive system revealed that the “wall” consists of a

⁶ This interior was discovered in 2002. In 2003, 2006-2008 there were undertaken excavations in an area of 288 m² (Zanoci, Moldovan 2004; Niculiță, Zanoci, Arnăuț 2008, 151-162, fig. 160-173; Zanoci, Băț 2011).

casing made of wooden beams with a width of about 3 m and filled with earth and stone. In front of the “wall” at a distance of 2.7 m, there have been found traces of a ditch having a width of 2.2 m at the top and a depth of 0.5 m from the ancient ground surface (fig. 8/2). The small proportions of the ditch does not correlate with the characteristics of a defensive element, rather they testify that it was used to drain water (Niculiță, Zanoci, Arnăuț 2008, 151-153, pl. 9, foto 27-30).

Archaeological research conducted within the fortress, although modest in size, have revealed nine household pits and various archaeological material related to the 5th/4th-3rd centuries BC (Niculiță, Zanoci, Arnăuț 2008, 153-162, fig. 162-173; Zanoci, Băț 2011, 116-130).

The second interior⁷ (site coordinates: 47° 41' 23.7000" North, 28° 57' 48.3800" East) was located to the south, representing, in fact, an annex of the first one. It had an irregular polygonal shape with dimensions of 307×254 m (about 7 ha) and was bounded on the west by the steep slope of the depression (fig. 7). On the south and east there was an artificial defensive system, represented by a ditch and perhaps “wall” or palisade forming a semicircle with a total length of 458 m (Niculiță, Zanoci, Băț 2013, 299).



1



2

Fig. 8. Saharna “La Șanț”. 1 - View of the headland from the north;
2 - ruins of a defensive structure

Fig. 8. Saharna “La Șanț”. 1 - Vedere a promontoriului dinspre nord;
2 - ruinele construcției defensive.

⁷ It was identified in 2008 as a result of study of orthophotoplans and field research.



Fig. 9. View of the headland from the southern part of the Saharna village.

Fig. 9. Vedere a promontoriului din partea de sud a satului Saharna.

The **Saharna "La Şant" I** fortification⁸ (site coordinates: 47° 41' 34.0300" North, 28° 57' 53.1200" East) is located about 200 m east of the site "La Şant" (fig. 4, 6, 7, 9). It was built on a ledge of the nearly triangular shaped hill and defended by a circular

defensive system which enclosed an inner area of about 0.9 ha. Remains of the defensive structures represent a "wave" having a width of about 3-4 m at base and a height of about 0.4-0.5 m. On the northern and eastern sides the defensive line is wavy, forming a kind of "bastions" (three on the north side and four on the east side) of arcuate shape in plan, with an opening of about

⁸ It was discovered in 2014 as a result of study of orthophotoplans and field research.



1



2

9-10 m (fig. 10/1). In order to clarify the technique and time of the “bastions” construction, there was made an archaeological excavation with dimensions of 10×2 m. As a result of archaeological research the existence of a defensive construction of about 1.1 m width, which consisted of two facings of wood and earth and stone filling, was discovered (fig. 10/3). Among the remains of the “wall” fragments of pottery of Thraco-Getic texture and several animal bones were found (Niculiţă et al. 2014, 27-28).

The **Saharna “La Şanţ” II** site⁹ (site coordinates: 47° 41' 31.4300” North, 28° 58' 8.0700” East) was located about 250 m southeast of the previous one and also occupies a ledge of a hill, which rises above the Dniester valley (fig. 4, 6, 7, 9). The estimated area of the fortress is about 0.45 ha. Remains of the defensive



3

Fig. 10. Ruins of bastions at present: 1, 3 - Saharna “La Şanţ” I; 2 - Saharna “La Şanţ” II.

Fig. 10. Ruinele actuale ale bastioanelor: 1, 3 - Saharna “La Şanţ” I; 2 - Saharna “La Şanţ” II.

⁹ It was identified in 2014 as a result of study of orthophotoplans and field research.

system could be traced only on the north and east sides and represent a wavy “rampart” forming a series of “bastions” (fig. 10/2). On the eastern edge of the hill they are curved outward, and on the north – inwards. The archaeological survey (10×2 m) conducted in one of the “bastions” on the north side revealed the same way of construction as in the case of the Saharna “La Șanț” I site. Here, however, were not certified chronological indicators, but based on the similarity of design, we assume that this defensive construction belongs to the Thraco-Getic period.

The site of **Saharna Mică** (site coordinates: 47° 41' 52.3800" North, 28° 57' 22.9800" East) lies north (opposite) of the fortification from Saharna Mare, being located on a promontory with absolute altitude of about 155 m that have steep and almost impregnable slopes on the south-west, south and southeast (fig. 4, 6, 7).

The first excavations were conducted by G.D. Smirnov in 1940s (Смирнов 1949b, 195). The investigations were resumed in 2003 and continued, with little interruption, until now¹⁰.

It was determined that on the promontory of Saharna Mică there were: an open settlement (late 12th c. - 11th c. BC), a fortification dated the 7th/6th-5th centuries BC, and a fortress of the 4th-3rd centuries BC (Niculiță, Zanoci, Arnăuț 2008, 13-50; Niculiță, Zanoci, Băț 2013, 296-298).

The fortress of the 4th-3rd centuries BC, with an area of about 1 ha, was defended to the north and northeast by two bastions. The northern bastion was in semicircular shape with a diameter of about 50 m. Its “wall” was constructed of a framework of wooden beams, with a width of about 8 m, filled with earth and stone (Niculiță et al. 2010, 374, fig. 14). The northeast bastion had a stone foundation, which represented a semicircular wall with a total length of 37 m and a width of between 5 and 9 m. Of the wall from two to nine rows of broken stone were preserved (Niculiță, Zanoci, Arnăuț 2008, 25, 169, fig. 2).

As a result of archaeological investigations in the habitation layer dated the 4th-3rd centuries BC four constructions, over 25 household pits and varied archaeological materials were discovered (Niculiță, Zanoci, Arnăuț 2008, 28-46, fig. 12-39).

The fortress of **Saharna “Dealul Grimidon”** (site coordinates: 47° 41' 51.0400" North, 28° 57' 49.8200" East) was discovered in 2014 as a result of field research (fig. 4). It is located on the northern side of the “Valea Crac” ravine, opposite the fortress of Saharna “La Șanț” I, at a distance of about 500 m east of the Saharna Mică site. Due to the fact that the place is covered with forest, the defensive system can be traced only partially, on the south side, where several “bastions” similar to those in neighboring sites were discovered. Estimated area of the fortification is about 0.4 ha.

¹⁰ During 2003-2009, 2011-2013 there was archaeologically investigated an area of about 450 m². The main results are published in: Niculiță, Arnăuț, Zanoci 2007; Niculiță, Zanoci, Arnăuț 2008, 13-50, fig. 1-39; Niculiță et al. 2010, 371-374, fig. 12-14.



Fig. 11. View of the headland from the northern part of the Saharna village.

Fig. 11. Vedere a promontoriului din partea de nord a satului Saharna.

The **Saharna "La Vile"** fortification¹¹ (site coordinates: 47° 41' 56.0100" North, 28° 57' 58.9600" East) is located on the northern side of the „Valea Crac” ravine, opposite the fortress of Saharna “La Șanț” II and in a distance of about 200 m east of the Saharna “Dealul Grimidon” fortress. It was located on a promontory formed by the confluence of the Dniester valley and the ravine mentioned above (fig. 11). The defensive system

is still attested only from the eastern and southern sides and represents arched “bastions” with an opening of about 10 m (fig. 12/1). Archaeological survey conducted in one of the “bastions” on the eastern edge of the promontory not resulted in the discovery of chronological indicators, but revealed the same way for construction of the “wall” – two wooden facings with filling of earth and stone (fig. 12/2).

¹¹ It was attested in 2013 as a result of study of orthophotoplans and field research. In 2014 a survey with the dimensions of 10×2 m was conducted.



1

Fortified sites in the northern part of the Saharna micro-zone

The **Stohnaia III** fortress¹² (site coordinates: 47° 43' 32" North, 28° 57' 33" East) is about 0.5 km southwest of the village of Stohnaia and 1 km north from the site of Saharna "La Revichin" (fig. 13/1). The fortification of quasi-polygonal shape with an area of about 4.5 ha is located on a high bank of the Dniester that in this place rises to about 100 m above the water level. On the north side the site is bordered by a deep canyon, on the east by the steep bank of the river, on the west by a rampart with the adjacent ditch and on the south by a rampart. The best preserved is a defensive line on the west side, where the rampart has the width of about 6 m at base and height of 1.5 m and the ditch has the width of 7 m and a depth of 1.5 m (fig. 13/2, 3).

The **Stohnaia IV** site¹³ (site coordinates: 47° 43' 46" North, 28° 57' 36" East) is about 1.3 km south of Rezina, north (opposite) of the Stohnaia III fortress (fig. 13/1). The quasi-triangular shaped fortification with an area of about 0.5 ha is located on a promontory with relative altitude of about 100 m, formed at the confluence of a canyon with a high bank of the Dniester. Remains of the defensive system can be traced only on the east side and represent a small rampart of about 0.3-0.4 m height and width of about 3-4 m.



2

Fig. 12. Saharna "La Vile". Remains of a defensive structure

Fig. 12. Saharna "La Vile". Ruinele construcției defensive.

¹² It was attested in 2013 as a result of study of orthophotoplans and field research.

¹³ It was discovered in 2013 as a result of study of orthophotoplans and field research.



1

Fig. 13. 1 - View of the canyon between Stohnaia III and Stohnaia IV from the east; 2 - view of the Stohnaia III headland from the north; 3 - ruins of the "rampart" from Stohnaia III at present.

Fig. 13. 1 - Vedere a canionului dintre Stohnaia III și Stohnaia IV dinspre est; 2 - vedere a promontoriului Stohnaia III dinspre nord; 3 - ruinele actuale ale valului de la Stohnaia III.



3



2



Fig. 14. Orthophotomap showing the location of the fortifications of Saharna "Hulboaca" and Buciușca (by <http://geoportal.md/>).

Fig. 14. Ortofotoplan cu localizarea fortificațiilor Saharna "Hulboaca" și Buciușca (după <http://geoportal.md/>).

Fortified sites in the southern part of the Saharna micro-zone

The **Saharna "Hulboaca"** fortress¹⁴ (site coordinates: 47° 39' 32.5034" North, 28° 59' 17.9042" East) is located about 1.2 km north of the Buciușca village on a promontory with relative altitude of about 70 m, formed by the high bank of the Dniester and a canyon. The semicircular fortress with an area of about 0.2 ha was bounded on the east by the steep bank of the river, on the edge of which there probably was an artificial defensive system (fig. 14). Its presence is attested by a defensive structure of the bastion type located on the northeast edge of the fortification. The bastion currently has semicircular shape with dimensions of 6.0×3.5 m (fig. 15). Its rampart retains a width of about 1.7 m and height of about 0.5 m. On the southern, northwestern and northern sides the fortress was defended by a ditch that currently has a width of about 11 m at the top, about 4 m at the bottom and the depth of about 2 m.

The **Buciușca** fortification¹⁵ (site coordinates: 47° 39' 20" North, 28° 59' 07" East) is located 0.65 km north of the Buciușca village, on a high bank of the Dniester, opposite the site of Saharna "Hulboaca". It occupies the north-eastern extremity of a plateau bounded by the Dniester River on the east and a deep canyon on the north side. The inner area of about 450×250 m (about 10 ha) was bounded on the north and east by relatively steep slopes and on the south and west by a rampart with adjacent ditch, which can be traced on a total

¹⁴ It was discovered by G.D. Smirnov in 1946 (Смирнов 1949b, 195). The archaeological reconnaissance was carried out in 2010 and 2015.

¹⁵ It was attested in 2010 as a result of study of orthophotoplans and field research.

length of about 600 m (fig. 14). At present, virtually the entire surface of the fortification is agricultural land, except the east and north ends, which are covered by forest. On the area subject to agricultural processing remains of the rampart have been preserved over a width of about 15 m, and it hardly reaches the height of 0.3 m (fig. 16). The ditch is visible over a width of about 8 m and its depth is about 0.4 m. The defensive system is better preserved on a stretch of about 37 m from the north-western extremity of the fortress, on the wooded area, where the rampart is about 11 m wide at the base and has a height of about 1.3 m, and the ditch has an opening at the top of about 6 m and a depth of 0.9 m.

To clarify the structure of defensive elements and the period of their building, on the south side of the fortress an archaeological survey with dimensions 10×1 m was conducted. As a result of archaeological investigations it was established that the so-called rampart is the ruins of a defensive structure of about 3 m width, consisting of a wooden framework filled with earth and gravel. Of the wooden structure there was preserved *in situ* a pit of a post with a diameter of 15 cm and a depth of 20 cm. Also, wood burning led to vitrification of the filling in some parts of the rampart.

In the vicinity of this defensive structure, beneath the debris, fragments of Thraco-Getic pottery were discovered (Niculiță, Zanoci, Băț 2012, 17-19).



Fig. 15. Saharna "Hulboaca". Remains of a bastion.

Fig. 15. Saharna "Hulboaca". Ruinele bastionului.



Fig. 16. Buciușca. Remains of the defensive system.

Fig. 16. Buciușca. Ruinele sistemului defensiv.

Fortified sites on intermediate territories

Along with fortifications located on the sides of the three canyons, in the Saharna micro-zone there are two sites located between them. Thus, between the groups of fortresses in the central part (“Valea Crac” canyon) and those in the northern part of the micro-zone there is the site of Saharna “Revichin”. And between the fortifications of the central part and those from the south of the Saharna micro-zone, on the opposite (left) bank of the Dniester, the fortress of Ofatinți is located.

The **Saharna “La Revichin”** fortress¹⁶ (site coordinates: 47° 42' 56" North, 28° 57' 46" East) is located about 1.7 km north of the Saharna „La Vile” site and about 1 km south of the Stohnaia III fortification. It lays on the right bank of the Dniester, which in this place reaches a height of about 100 m above the water level and has a semicircular shape, occupying an area of 150×70-75 m (about 0.9 ha). On the east-north-east side it is defended by high and steep bank of the Dniester, and on the remaining sides – by an artificial defensive system consisting of a “wall” with adjacent ditch. As a result of archaeological research it was determined that the “wall” was built out of a wooden casing of about 5 m width filled with earth and sand. The ditch has a width of 8 m and a depth of about 5.5 m (Levinschi, Covalenco, Abâzov 2002, 41-44, fig. 1; Levinschi 2004, 64, 74).

During the excavations inside the fortress there were attested three underground constructions, 12 surface

¹⁶ It was discovered by G.D. Smirnov in 1946 (Смирнов 1949b, 194). Archaeological excavations were conducted during 1998-2002 by the employees of the National Museum of History of Moldova (Levinschi, Șcipachin, Dulea 1999; Levinschi, Șcipachin, Negură 2000; Levinschi 2001; Levinschi, Covalenco, Abâzov 2002; Levinschi 2004).

constructions and varied archaeological materials, represented mostly by Thraco-Getic and imported pottery (Levinschi, Șcipachin, Negură 2000, 87-100; Levinschi 2001, 103-111; Levinschi 2004, 65-80, fig. 1-6).

The **Ofatinți** fortification¹⁷ (site coordinates: 47° 41' 13" North, 28° 59' 15" East) is located about 400 m north of the village of Ofatinți, Râbnița District, on the left bank of the Dniester, which in this place has relative altitude of about 85 m. The semicircular fortification with an area of about 10 ha was surrounded by an artificial defensive system. On the west side, on the high and steep bank of the river there was built a defensive line whose remains, which now is presented as a “wave” with a width of about 2-3 m at the base and a height of about 0.5 m (fig. 17/1). Also on this side there are remains of two constructions of the “bastion” type. The first, located around the southern flank of the fortress, have semicircular shape with dimensions of 4×2 m. The second – in the middle of the defensive line on this side – has the same semicircular shape with dimensions of approximately 20×10 m (fig 17/3).

On the northern, eastern, and southern sides the site was fortified with a rampart with the adjacent ditch¹⁸ (fig. 17/1, 2, 4).

¹⁷ It was discovered in 1946 by G.D. Smirnov (Смирнов 1949b, 192-193). In 1952 A.I. Meljukova undertook archaeological research in an area of 336 m² (Пассек 1952, 78-86; Мелюкова 1954, 65-67; Мелюкова 1955, 64-67). In 2015, there was conducted surface research by I. Niculiță, A. Zanoci, M. Băț and S. Fidelschi.

¹⁸ In 1952, when excavations were conducted by A.I. Meljukova, the rampart height was about 2 m, and the ditch had a width of about 6.7 m and a depth of 2.6 m (Мелюкова 1955, 64-65). Currently the defensive system remnants are better preserved on the northwest portion, where the rampart has a width of about 5 m at the base and a height of about 1.2 m. Further along the line, the rampart and the ditch were affected by agricultural works, being strongly flattened.



1



2



3



4

Fig. 17. Ofatiinți: 1 - orthophotomap (by <http://geoportal.md/>); 2 - view from the south; 3, 4 - remains of the defensive system at present.
 Fig. 17. Ofatiinți: 1 - ortofoplan (după <http://geoportal.md/>); 2 - vedere dinspre sud; 3, 4 - ruinele actuale ale sistemului defensiv.

As a result of archaeological investigations inside the fortification there were discovered remains of a surface dwelling, three household pits, and numerous fragments of Thraco-Getic pottery (Мелюкова 1954, 65-67, рис. 31; Мелюкова 1955, 64-67, рис. 14, 15; Kašuba, Haheu, Levițki 2000, 41-48, pl. XIX-XXIII).

Open settlements in the Saharna micro-region (fig. 1; 2) usually are located in the immediate vicinity of the fortifications, forming the so-called “extra-murus” zone. For example, near the Saharna “La Șanț” fortress there were two civilian settlements (Saharna “Budei” and Saharna “Rude”), and in the vicinity of the Saharna Mică, Saharna “La Revichin”, Stohnaia V and Saharna “Hulboaca” fortifications – one more.

Conclusions

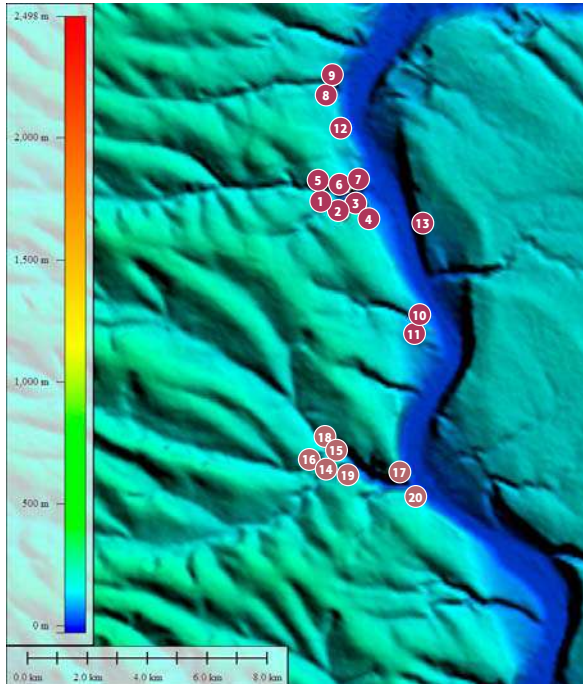
Based on the results of geospatial and field investigations, it appears that most sites, both fortified and unfortified, are concentrated in the central part of the Saharna micro-zone, on the sides of the “Valea Crac” canyon (fig. 18/1). This fortress of Saharna Mare occupies a special position here, being located on the most secluded place (about 1 km west of the Dniester) and less exposed to direct attacks from the east. Access to the site from the river was possible only through the canyon. In order to control this corridor, on its northern side there were built the fortifications of Saharna “La Vile”, Saharna “Dealul Grimidon” and Saharna Mică, and on the southern side – the fortresses of Saharna „La Șanț” II, Saharna „La Șanț” I and Saharna „La Șanț”. The visibility analysis (after Global Mapper) showed that the possibilities to observe the Dniester valley, both

upstream and downstream, from Saharna Mare are reduced (fig. 18/2). However, this could be done very easily from the fortifications located on the high bank of the Dniester – Saharna “La Vile” and Saharna “La Șanț” II. The visibility analysis also shows that the sites from the sides of “Valea Crac” canyon had a perfect visual contact with each other. Accordingly, any “information” about the “movements” in this space could come directly or through other fortresses in the Saharna Mare site.

It also can be observed the existence of visual contacts between sites in the central part of Saharna micro-zone and those in the northern and southern flanks. Thus, the link between the fortifications of Stohnaia III and Stohnaia IV located on the northern side and those located on the sides of the “Valea Crac” canyon was possible through the site of Saharna “La Revichin”, which occupies an intermediate position between them. And the link between the fortifications in the southern part (Saharna “Hulboaca” and Buciușca) and the fortifications in the center part was possible through the fortress of Ofatiñi, located on the left bank of the Dniester (fig. 18/3, 4).

The visibility analysis performed for the entire Saharna micro-zone shows that from the fortifications described above, they could monitor the territory east of the Dniester at a distance of about 6 km from the river. Similarly, the Dniester basin was controlled not only on the portion between the fortifications of Stohnaia IV (in the north) and Buciușca (in the south), but also about 15 km upstream and about 6 km downstream (fig. 18/3).

After studying the topography of sites in the Saharna micro-zone, we can assume that, in terms of strategy

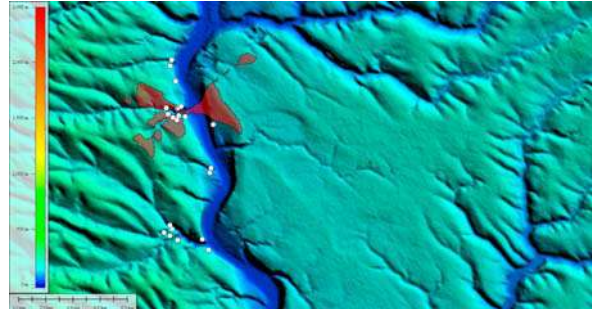


Saharna micro-region:

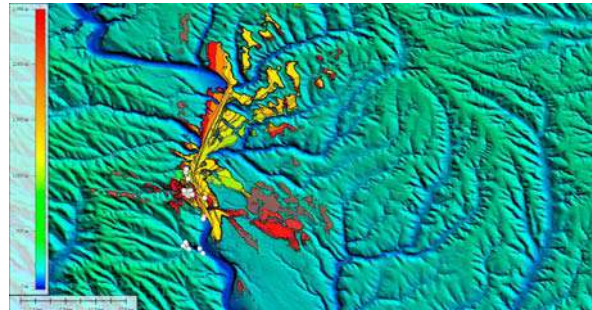
- 1 - Saharna Mare;
- 2 - Saharna "La Șanț";
- 3 - Saharna "La Șanț" I;
- 4 - Saharna "La Șanț" II;
- 5 - Saharna Mică;
- 6 - Saharna; "Dealul Grimidon";
- 7 - Saharna "La Vile";
- 8 - Stohnaia III;
- 9 - Stohnaia IV;
- 10 - Saharna "Hulboaca";
- 11 - Buciușca;
- 12 - Saharna "La Revichin";
- 13 - Ofatinți

Horodiște-Țipova micro-region:

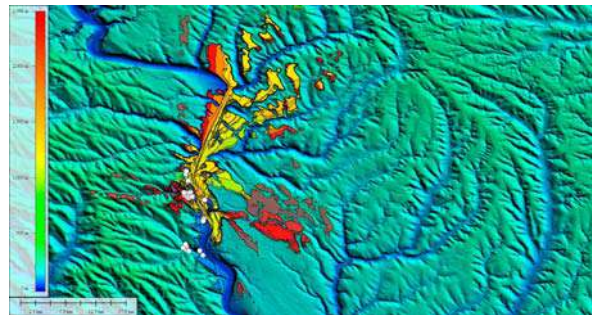
- 14 - Horodiște „La Cot”;
- 15 - Horodiște „La Șanț”;
- 16 - Horodiște II;
- 17 - Buciușca II;
- 18 - Buciușca III;
- 19 - Țipova III;
- 20 - Țipova IV



2



3



4

Fig. 18. 1 - Map of fortifications of the Saharna and Horodiște-Țipova micro-regions; 2 - 25 km visibility range for Saharna Mare site; 3 - 25 km visibility range for sites no. 1-9, 12; 4 - 25 km visibility range for sites no. 1-13.

Fig. 18. 1 - Harta fortificațiilor din microzonele Horodiște-Țipova și Saharna; 2 - raza de vizibilitate de 25 km pentru situl Saharna Mare; 3 - raza de vizibilitate de 25 km pentru siturile 1-9, 12; 4 - raza de vizibilitate de 25 km pentru siturile 1-13.

the fortification of Saharna Mare occupies a key position in this space. The important role of the fortress is demonstrated by the large surface (6 ha) and the complexity of the defensive system – the “wall” surrounding the interior, bastions erected on the flanks, etc. the “privileged” status of the Saharna Mare site is confirmed by the discoveries in the fortress – surface dwellings, pits for storing supplies, places of worship, as well as rich findings. Among “prestigious” materials from this site there is a fragment of quartzite scepter (Niculiță, Zanoci, Arnăuț 2008, 181, fig. 159/1), adornments made of silver and amber (Niculiță et al. 2013, 262-265, fig. 50-52) and imported pottery (Niculiță, Zanoci, Arnăuț 2008, 136-140, fig. 142-144; Niculiță et al. 2013, 278-280, fig. 68, 69)¹⁹.

Based on the above, at the current state of research we can assume a certain hierarchy of sites in the Saharna micro-zone. Thus, the fortification from Saharna Mare can be seen as a central location, which possibly had some economic, administrative, social, political and religious functions.

Smaller fortifications (0.4-0.9 ha), with an insignificant cultural layer, but placed on the dominant places, with wide possibilities of surveillance of space around, from our point of view, acted as outposts – Saharna “La Șanț” (small inside), Saharna “La Șanț” I, Saharna Mică, Saharna “Dealul Grimidon”, etc. and large fortifications²⁰ – Stohnaia III (4,5 ha), Saharna “La Șanț” (large inside, 7 ha), Buciușca (10 ha), where the cultural layer is absent

or insignificant, can be considered as a refuge for communities from the open settlements.

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¹⁹ See the article by N. Mateevici in the present collection (p. 47-61).

²⁰ Interesting to note that these sites are located proportionally, one in the northern part of the Saharna micro-zone, other – in the center, and the third – in the south.

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