

IRON AGE FORTS IN THE NORTHERN PART OF THE CENTRAL MOLDAVIAN PLATEAU (5th – 3rd CENTURIES BC)

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Abstract. Between the 5th and 3rd centuries BC, at the turn between the Early and Late Iron Age, a significant number of fortresses were built in the in the East Carpathian area. A dynamic micro zone in this period is represented by the northern area of the Central Moldavian Plateau. In the analyzed area, we have 11 fortresses belonging to the 4th-3rd centuries BC, 8 of them almost certainly dated in this interval. Using data from LIDAR we managed to map these forts. The most important, considering the significance of the archaeological discoveries made, is the one from Bunești - Dealul Bobului. The economic richness of the local communities is reflected in the large number of imports, visible in almost all archaeological objectives investigated in our area of interest.

1. Introduction

Between the 5th and 3rd centuries BC, at the turn between the Early and Late Iron Age, a significant number of fortresses were built in the in the East Carpathian area, having quite impressive sizes, the result of massive collective efforts (Sîrbu and Trohani 1997, p. 512-539; Zanoci 1998). These efforts represented not only a simple answer to the danger represented by the seasonal raids of steppe nomads and endemic intertribal conflicts, but also the consequence of social, economic and cultural accumulations (Ursulescu 2018, p. 287-288) that favored in this period the appearance of powerful elites with a prominent identity (Sîrbu 2002; Florea 2011, p. 38-41).

A dynamic micro zone in this period is represented by the northern area of the Central Moldavian Plateau. Despite the relatively large number of significant archaeological objectives known in the literature - fortifications and settlements - archaeological investigations were rather limited in scope. We are mostly dealing with surveys and small scale excavations, the only better known and published objective being the fortress from Bunești - *Dealul Bobului*. Also, for most of the reported forts there were no published plans, numerous uncertainties persisting in the specialized literature regarding their size, aspect, chronology, etc.

In the present paper we intend to complete as much as possible this preliminary picture, discussing a series of data on forts planimetry, while also discussing their possible functions, starting from the results of archaeological diggings but also other categories of data. We also paid attention to the problem of the possible aristocratic necropolises related to some of the studied objectives.

A very useful tool we used in this study is represented by the DEM (Digital Elevation Model) obtained as a result of the LIDAR scans carried out by ABA Prut Bârlad, made available to us following a protocol concluded with the Institute of Archeology in Iași. Having a good resolution - 0.5m - this is an excellent tool for analysis, especially in heavily forested areas like our study area.

2. The local geography

From a macrogeographical point of view, the studied area is located at the western borders of the great Euro-Asian steppe, at the contact area with the forest steppes situated at the foot of the Eastern Carpathians (Pl. 1/1). From the point of view of the local geography, the sector we are analyzing stands in the interfluvium between Siret and Prut rivers, in the area of Moldavian Plateau (Pl. 1/2), more precisely in the area known as Coasta Iașilor (Iași Coast) or Colinele Iașilor (The Hills of Iași). To the north, the limit is represented by the basin of Bahlui and the hilly lowlands of the Moldavian Plain, characterized by a vegetation specific to steppe areas, quite exposed to northern winds and – apparently - less densely populated in the 5th – 3rd centuries BC. To the west, the limit is the large corridor of the Siret Valley, an important communication route. To the south, the area is bordered by the Tutova Hills and the Fâlcu Hills, the eastern limit being represented by the Prut Valley, another major route.

The relief is characterized by the presence of large structural plateaus cut by deep valleys and bordered by steep scarps. Altitudes are quite low; only sporadically are reached heights of 450-500 m. However, the quite large differences in level compared to the low valleys (200-300 m, sometimes even more) as well as the strong fragmentation of the relief often gives the impression of a low mountainous landscape.

The area is poor in natural resources that could be exploited with the technical means known in Antiquity. These had to be procured by the local communities through exchanges (or other means). However, we can safely suppose that 2500 years ago - as nowadays - there were large forests that offered wood as well as abundant game. The fertile soils in the valleys - mainly chernozems - provided the necessary means for practicing agriculture and animal husbandry. Palinological analyses on recovered materials from the Răducăneni fortress attest the cultivation of barley, wheat and hemp during this period (Monah 1988, p. 304).

3. Description of the fortresses

3. 1. The fortress of Crivești (Strunga commune, Iași County)

The fortress (Pl. 2/2) has an approximately oval shape, with a long axis of about 190m in the direction SE - SE and 120m on the SV - NE transverse axis, covering a total area of approx. 2.5ha (Boghian, Berzovan, Enea 2017, p. 201-206). The degree of conservation is quite modest, the fort being heavily affected by the subsequent 18th-century dwellings, various agricultural works, but especially the military arrangements made during the Second World War. The rampart is well preserved on about 30% of its estimated length, having a width of up to 8 - 10m and a current height of approx. 1.5m. It is hard to say to what extent the circular structure (about 30m in diameter) visible in the northern curvature of the fortress represents the traces of an ancient bastion or, more likely, the remnants of a military command point used during the confrontations of 1944. From the point of view of its shape and size, the fort of Crivești belongs to the category of simple defensive constructions, of small size, that combine natural defense elements (steep slopes, deep valleys), with the anthropic ones (external ditch, earth rampart, probably palisade).

It cannot be excluded that the fortress of Crivești represents the fortified part of a larger habitation ensemble that occupied the entire plateau, judging by the spreading of the archaeological materials on the surface. Non-destructive, magnetometric research could provide some answers to this problem.

In the absence of archaeological excavations, the chronology of the fort is difficult to establish. The surface materials – local pottery, sporadic fragments of Greek Amphorae – that we

have consulted suggest a classification during the 4th-3th centuries BC (Boghian, Berzovan, Enea 2017, pp. 201-206).

At approx. 3km northwest of the citadel (Pl. 2/1), there is the massive tumular complex of Movileni (Heleşteni). It consists of two large mounds (diameter at the base of about 94-96m), joined by a rampart of approx. 120m long, with a width of 45 to 50m (Pl. 2/3). In 2001 archaeological research was carried here by a team led by Professor Nicolae Ursulescu. The excavations targeted the rampart connecting the two mounds. No certain dating elements were found, with the exception of a ceramic fragment from the late Bronze Age and a fragment belonging to a Hellenistic amphora, the latter being appreciated by the authors of the excavation as coming from an Iron Age settlement contemporary to the moment when the tumuli were built (Ursulescu *et alii*. 2002, p. 209-211). In the light of these preliminary findings, it cannot be ruled out that the two mounds represent an aristocratic necropolis from the Iron Age, likely related to the Criveşti fortress, but this hypothesis, of course, requires additional archaeological confirmations.

3. 2. The fortress from Oţeleni / Bâra, (Oţeleni commune, Iasi county / Bâra commune, Neamţ County)

This fortress was the subject of some confusion regarding its location, some of the authors placing it in the cadastral border of the commune of Oţeleni (Chirica and Tanasachi 1985, p. 295), others inside the borders of the Bâra commune (Dumitroaia 1992, p. 287). In the absence of necessary clarifications a historiographical confusion was generated, so that some authors came to speak of two distinct forts (see Haheu 2008, pp. 66 and 76, Arnăuţ 2003, p. 185 and p. 243; Zancoci 1998, p. 118 and p. 143).

In fact, there is only one fortification, the cadastral border between the two communes and the two counties passing right through it, the western third belonging to the county of Iaşi and the other two thirds to the Neamţ County¹.

From a geographic point of view, the objective, known locally as "Movila lui Ştefan cel Mare" or "Cetatea", is located on the north-western promontory of the Bulgăriei Hill, named also Cetatea Hill, having a total altitude of 250m, dominating with about 60m difference in level the lower surrounding areas. It is bordered by the Albaia brook at the NE and at Brăileanu Valley to the SV, both belonging to the Siret river basin. The total area is approx. 11ha. The fortress benefited from an archaeological survey carried out in 1990 by Emil Moscalu and Ştefan Scorţanu (Dumitroaia 1992, p. 287). Some interdisciplinary surveys were carried out in 2014 by the Arheoinvest platform at Alexandru Ioan Cuza University in Iaşi.

Chronological framing was made on the basis of the rather rich materials gathered from the surface and during the surveys: local pottery, fragments of Hellenistic amphorae, bronze „Scythian” type arrowheads, etc. (Chirica and Tanasachi 1985, p. 295, Dumitroaia 1992, p. 287, Arnăuţ 2003, p. 243).

Based on the analyzed DEM, we note that the fortress presents a rather complex plan, suggesting at first sight several functional stages (Pl. 3/1), impossible to delimit precisely in the absence of excavations. In the western area, we have a first enclosure, bounded by ditch and rampart, better observable to the SV. To the east, the boundary of this first enclosure seems to be a fairly dilapidated ditch that separates it from the second. The second enclosure is delimited south by a well outlined rampart and ditch and to the east by another possible ditch, rather poorly visible on

¹ We offer thanks to Professor Mihai Vasilescu (Târgu Frumos) who offered us the necessary data in order to clarify this issue. For further confirmations, see the map from ANCPI (<http://geoportal.ancpi.ro/geoportal/viewer/index.html>).

the DEM used by us. The northern boundary was affected by a modern road of exploitation, so the route of the defensive elements can only be reconstructed hypothetically. To the east of this poorly contoured trench, we are dealing with a third rectangular enclosure with slightly rounded corners. Here the ramparts are very visible on field, reaching a height of approx. 7 m. It cannot be excluded that this distinct sector represents a medieval reuse, judging by the presence on the surface of some archaeological materials that belong to the 15th-16th centuries. On the other hand, one cannot neglect the hypothesis that this third enclosure could represents a "bastion" of the Iron Age fortress, similar to the ones we encounter at some contemporary fortifications in the Prut-Dniester area, for example in Saharna Mare and Saharna Mică (Zanoci and Băţ 2017, p. 11-17). The lack of historical sources for the existence of a medieval fort here could give more credence to this hypothesis.

From a strategic point of view, the Oţeleni / Bâra fortress could control the access routes coming from the Siret Valley to the Bahlui Valley Valley, but also to the Bârlad basin.

3. 3. An Iron Age fortress at Poienile - Dealul Şanţurilor? (Dagâţa commune, Iaşi County)

The analysis of satellite imagery and DEM allowed us to observe an unknown fortress on the outskirts of the village of Dagâţa village (some vague information at Chirica and Tanasachi 1984, p. 120). It is situated on the Şanţurilor Hill (Pl. 3/2), a high plateau located at the source of the Petriş Valley, a tributary of the Mănăstirii Valley in the Bârlad River basin. The objective is located at an altitude of approx. 400m, dominating with approx. 150 - 200m difference in level the lower surrounding areas. The viewshed is excellent, especially to the south and southwest. The fortification elements were built on the southern side, the only one easily accessible and usable from a military point of view.

The rampart appears to have a base width between approx. 15-18m and the adjacent ditch is about 5 to 6m wide. The height the rampart oscillates between 0.7 - 1.5m. The area was heavily affected by the intense ploughing. The defensive elements are better preserved on the western side. The ditch and the rampart enclose an area of approx. 10ha. In the southern area of the hill, towards the village of Poienile, another possible anthropic ditch can be seen on the DEM as well as on the satellite images, with a visible opening of approx. 10m, in its turn heavily flattened by intense agriculture; it could represent the limit of a second, much larger enclosure.

Due to bad weather conditions, the archaeological survey we have done did not permit us an extensive coverage of the entire area. The yellowish soil, devoid of pigment and archaeological materials of any sort does not suggest at first sight an intense habitation. It seems we are dealing more likely with a refuge fortification.

At the moment we lack any concrete argument to date the defensive works in the Iron Age (or in any other period). However, considering the existence of obvious typological similarities of this fortification to other objectives dated beyond a doubt in the Iron Age (for example, the fortress from Cotu Copalu in Botoşani County, see Şovan and Ignat 2005), we have decided to insert this point in our study as a possible place of interest.

3. 4. The fortress from Poiana Mănăstirii - Între Şanţuri (Țibana commune, Iaşi county)

Found in the 80s of the last century, the fortress from Poiana Mănăstirii-Între Şanţuri is located on the Teilor Hill, known also as the Şanţurilor Hill, at 2,5km NE in a straight line from the village of Țibana and 1,9km NNE from the village of Poiana Mănăstirii. The hill has the shape of a prolonged plateau on the N-S axis, bordered by the brooks of Țibana with its tributaries to the west, and Urşiţa brook to the east. It has a maximum height of 448.3m, in the northern sector, and 431.8m in the Şanţurilor Hill, in the southern sector, being in fact an interfluvial ridge between the Stavnici

and Sacovat rivers of the Bârlad basin. The dominant position - over 200m above in comparison to the surrounding lower areas - provides excellent visibility in all directions, especially to the south (Berzovan 2016, p. 216-218, Berzovan *et alii*, 2017, p. 305-323).

The fortress (Pl. 4/1) has an elongated oval shape (800 x 400 m maximum diameters). Unfortunately, due to repeated landslides, the rampart and the ditch on the western, eastern and south-eastern sides had been severely destroyed, so that the proper form of the fortress in these sectors is purely hypothetical.

Test diggings were made in 2017 by a team composed of A. Berzovan, D. Boghian and S. Enea. The defense rampart (Pl. 9/1) we have researched shows a fairly simple structure, consisting of two nuclei made with soil drawn out of the trench. In the upper area we can see the traces of wooden poles that supported the palisade, possibly even towers. It cannot be excluded that we have to deal with two distinct phases of functioning. In some sectors of the rampart, there are consistent traces of burning (Berzovan *et alii*, 2017, p. 305-323).

Interesting data was also provided by the magnetometric prospections (Pl. 4/2) made by Carsten Mischka and Imren Tasimova from the Erlangen University (Germany). On the scanned strip in the central-western area of the enclosure were identified the traces of two large anomalies, interpreted as the remnants of burned structures - confirmed by our test trench- while in the eastern part were identified other sporadic anomalies, possibly pits and dwelling complexes. The density of the complexes is not very high; in fact, there are vast areas almost completely devoid of archaeological traces. The same situation is also found in other contemporary Iron Age forts from the East-Carpathian area; for example in Stâncești (Florescu 1971, p. 103; Florescu and Florescu 2005, p. 23), but also in other parts (Arnăuț 2003, pp. 30-31). In any case, by its size - ca. 15ha preserved - the fortress at Poiana Mănăstirii is one of the largest fortifications in this area.

As far as the chronology is concerned, the materials we have collected date mostly between the 4th - 3rd centuries BC. The dating was done on the basis of local pottery, but also on the basis of Hellenistic amphorae fragments. Noteworthy is the presence of sporadic pottery fragments belonging to the Poienestî - Lukasevka culture (Berzovan *et alii* 2017, p. 305-323).

In the archaeological repertoire of Iași County are mentioned a number of other small Iron Age settlements located in the vicinity of the fortress of Poiana Mănăstirii. They are generally uncertain in nature - in some of these cases it is more likely that we are dealing with archaeological material rolled downhill from the fortress.

Of particular interest are the tumuli situated in the Alexeni village, named „La Faur”, located at approx. 2km away from the fortress (Pl. 4/3). In the literature there were mentioned three mounds, of which two were interlaced, with pottery fragments typical to the 4th-3rd century BC present in their destroyed mantle. However, the high resolution DEM gives us the image of a possibly larger and more complex tumular necropolis with approx. 8-9 mounds (Pl. 4/4), most of them flattened by agriculture. Their layout reminds us of the well-known Iron Age Getae aristocratic necropolis of Cucuteni – *Dealul Gosan* (Chirica and Tanasachi 1984, pp. 112-113, Dinu *et alii* 1984). It is possible that the necropolis of the Poiana Mănăstirii fort's aristocracy was located here. It remains for further archaeological investigations to confirm this hypothesis.

3. 5. A lost Iron Age fortress in Mogoșești? (Mogoșești commune, Iași County)

Information about the existence of a fortress in Mogoșești is found in the works of the early 19th century historian Dionisie Fotino who mentions the existence of ancient fortifications in this locality, considering them to be the ruins of the ancient Dacian *poleis* Marcodava (Fotino 1859, p. 67). Later, on the field research carried out by a team led by Nicolae Zaharia (Zaharia *et alii* 1970,

p. 208-209), found in the area named Bățului Hill a significant number of ceramic fragments from the 4th-3rd centuries BC, while also documenting the existence of defensive ditches in the area. However, on the occasion of the researches carried out in the 1980s which led to the re-identification of the site on the field, the elements of fortification could no longer be found (Chirica and Tanasachi 1984, p. 244).

The technical means we have used in this study have been of no use in identifying the traces of this fortification, whose existence is at the moment rather questionable. It is possible, however, that it really existed - judging by the rather rich material recovered from the surface during the surveys of N. Zaharia - but ended up destroyed in the following decades as a result of intensive agriculture and landslides.

3. 6. A complicated situation. The fortress of Poiana cu Cetate (Grajduri commune, Iași County)

An interesting and complicated situation is offered by the fortress (Pl. 5/1) situated on the border of the village of Poiana cu Cetate (Chirica and Tanasachi 1984, p. 159). It occupies a promontory defended on three sides by steep slopes; it has a length of approx. 125m and a width approx. 50-55m, being situated at the springs of the Cutigna brook from the Bârlad basin. It is located at an altitude of approx. 335-340m. The total enclosed area is approx. 0.50ha. The viewshed is strictly limited to the surrounding areas. The northern part, the only one easily accessible from a military point of view, was defended with a massive rampart, reaching a width of 17-18m and a current height of around 3-4m, the trench presenting an opening of approx. 20m. Within the fortress, immediately behind the rampart, is visible a massive depression with a diameter of around 15m, which could be either a pit dug by treasure hunters in historic times, or a crater resulting from the explosion of a large caliber shell.

The archaeological fieldwork carried out by us and by our predecessors (Chirica and Tanasachi 1984, p. 159) has led to the recovery of a rich archaeological material. It belongs in overwhelming proportion to the Cucuteni culture's A3 phase, but there are also fragments from the 4th - 3rd centuries BC and few from the medieval period. Since there are no ramparts and ditches of such magnitude documented so far in the Eneolithic period, it seems that the fort belongs to either the Iron Age or the middle Ages. At first glance, the attribution of this fortress to the medieval period would seem more plausible, since a historical document issued on 8 October 1462 refers to a point "Muncel, where used to be the fort of Duma Negru" (Documenta Romaniae Historicae, A, II, p. 161), however, the subsequent documents make it clear that it is not a „fort” in discussion but a simple placename². The usage of this fort as a 15th century boyar residence should have left more consistent archaeological traces of a much different kind than those we see on terrain (see the more detailed discussion in Apetrei 2009, p. 250-251).

Even though the attribution of this fortification to the Iron Age appears to us more likely, we believe that archaeological excavations are necessary in order to fully clarify the cultural attribution and chronology.

3. 7. The fortress from Dobrovăț - Cetățuia (Dobrovăț commune, Iași County)

The objective occupies the elongated promontory of a hilltop called "Cetățuia" (Pl. 8/3), bordered on three sides by steep slopes, having a total altitude of approx. 270m, and dominating with approx. 80-90m the lower neighboring areas (Pl. 5/2). The size of the plateau is rather small: the length is approx. 55-60m, width approx. 20-40m; even if we admit that much of it has collapsed

² In Romanian language, Poiana cu Cetate translates as the „The glade with a fortress”.

over the past decades as a result of landslides, the fort could not have been much larger. The viewshed is not very extended, but it allows surveillance of the whole depression area of Dobrovăț (Berzovan 2016, p. 222).

The defensive elements are very poorly preserved, being almost completely destroyed by landslides. It looks like we're dealing with two enclosures. The ramparts are well visible on the north side, while on the western side their course is more or less hypothetical. The southern side seems to have been defended with a ditch, quite flattened. It is curious that there are no large defensive works in this sector, considering it is quite exposed to an enemy attack. The preserved area of the fort is somewhere around 0.77 ha.

The recovered materials - especially local pottery, but also a „Scythian” type bronze arrowhead – helps to date this fortress largely during the 5th-3rd centuries BC (Berzovan 2016, p. 222-224).

3. 8. The fortress of Răducăneni - *Cetățuie* (Răducăneni commune, Iași County)

The fortress is situated on a northern extension of Socilor Hill, at an altitude of about 280m, dominating by approx. 180m difference in height the lower surrounding areas (Pl. 6/1). Although well known in the literature (Chirica and Tanasachi 1985, p. 334), with systematic archaeological research between 2003-2010 conducted by a team led by Vicu Merlan (Merlan 2007; Merlan 2009; Merlan 2010a; Merlan 2010b), no overall plan of the fort has been published so far.

The fortress has an approximately rectangular shape with rounded corners, 150m long in the NE-SV direction, respectively 130m on the NV -SE direction, with a total surface area of approx. 2ha. The defensive elements are heavily affected by various modern interventions and landslides, so that our proposed reconstitution has to be taken with some precautions. The rampart is clearly visible on the northern, eastern and southern sides, while the western and northwestern sectors were affected by landslides. Quite flattened, the rampart presents a base width of approx. 15-20 meters. Some stratigraphic observations were made on the occasion of the archaeological excavations, the author appreciating that in the case of the rampart we had to deal with several distinct stages of use (Merlan 2009, p. 3, Merlan 2010a, pp. 37-39). On the eastern side one can see on the DEM what might be a rest of the defense ditch. By its shape and size, the fort of Răducăneni is quite similar to that of Crivești.

It is quite possible that the fort also had one or more open settlements in its vicinity, which makes it possible for it to have been part - together with the Moșna fort, located only 2km south - of a larger scale habitation complex. In terms of chronology, the few materials published in the archaeological reports suggest a dating of Iron Age dwelling during the 4th - 3rd centuries BC.

3. 9. Moșna Fortress (Iași County)

The fortress is situated on the border of the western village of Moșna village, occupying the eastern sector of the high plateau of Socilor Hill, at the mouth of the Moșna valley, at an altitude of approx. 413-420 m, dominating with approx. 200 - 250 m difference in level the lower, surrounding areas. The objective benefits from a very good visibility to the east, along the Moșna Valley, and even towards the Prut Valley. The fortress (Pl. 6/2) has an approximately pentagonal shape, being defended on the accesible sides by a rampart with a width of approx. 18-19 m and heights varying between 0.75 - 3 m, and an adjacent ditch with a depth of 3-4 m and a width of 12-15 m (Florescu, Melinte 1968, p. 130, Conovici 2000, p. 156). In the northern area there is visible on the DEM another small trench with a rampart that closes another access path to the plateau. In the southern and eastern sectors we can see a possible ditch or rather a road (?) dug in the steep slopes of the hill.

Thus, the fortress seems to present defensive elements on all sides. The total protected area was considered by some to be 9ha (Florescu, Melinte 1968, p. 129; Conovici 2000, p. 156; Turcu 2002, p. 108) but in reality, measured on DEM, the total surface of the fort is approx. 12ha.

In the south-eastern sector, not far from the edge of the plateau there is a massive mound, with a diameter of at the base of approx. 95-100m and a height of approx. 10m. Inside, one can see the traces of a massive excavation made by treasure hunters. It is worth noting that somewhere around the fort, in the early 20th century, was discovered a deposit from the Bronze Age.

The fort was first investigated by N. Zaharia and A. Brătianu in 1956, and in 1966, archaeological diggings were carried out by A. C. Florescu and Gh. Melinte (Florescu, Melinte 1968). These excavations targeted the defensive system. According to authors, traces of dwellings from the 3-2 centuries BC were revealed, including with Poieniști-Lukaševka fragments. The defense rampart (Pl. 9/3) presents a rather simple structure, similar to that of Stâncești (Florescu, Melinte 1968, p. 130). In the upper part of the rampart were seen numerous remains of burnt adobe, and red-burned soil that were interpreted by the authors as the remains of some dwellings, in our opinion rather remnants of the burned superstructure of wood and earth that existed on top of the rampart.

In 2008, new surveys were carried out by a team composed of V. Merlan, T. Marin and M. Văleanu (Merlan 2013, p. 6). Among others, the team tried to elucidate the problem of the dating and functionality of the mound by using a rather „interesting” excavation technique, namely the deepening of the older excavations made by the treasure hunters; the action did not lead to relevant archaeological results.

The issue of the stratigraphy and chronology of this important objective, the chronological and functional relationship between the mound and the fortification elements waits to be elucidated by future excavations.

3. 10. The fortress from Bunești - Bobului Hill (Bunești - Averești commune, Vaslui County)

Perhaps the most spectacular objective in the entire analyzed area - in terms of the quantity and quality of archaeological discoveries - is the fortress from Bunești - Bobului Hill (Coman 1980, p.89). The fortress occupies a promontory of Bobului Hill (Pl. 7/1), slightly inclined from SE to NW, and bordered on three sides by steep slopes. The altitudes oscillate between 340 - 310 m, the point dominating by approx. 170 m difference in level lower surrounding areas. The area of visibility is not a very large one, limited mostly to the adjacent areas.

The fortress is approximately square in shape with rounded corners, having a length of approx. 210 m and a width of approx. 130 m. It was defended by a rampart on all sides, better preserved on the eastern side, and on the northern one but affected by landslides on the south. On the eastern side, the rampart is quite large, reaching some 25 m wide and current heights of about 9 m (Bazarciuc 1984a, 169), while on the northeast side, the height being approx. 4-5 m. With regard to the total area of the fortress, several figures were proposed in the literature, 10-12 ha (Zanoci 1998, p. 123), 6 ha (Bazarciu 1979, p. 130; Turcu 2002, p. 43; Haheu 2008, p. 67), according to other authors only 5 ha (Arnăuț 2003, p. 195). In fact, the area enclosed by the earth ramparts measured by us on the DEM is much lower, of only 2.71 ha. There are obvious similarities in shape with the forts of Crivești and Răducăneni.

The fortress benefited from long-term archaeological excavations carried out by V. V. Bazarciuc (Teodoru). The often contradictory information presented in some of the published reports makes it difficult to reconstruct the archaeological situation. It seems that 30 rectangular dwellings have been discovered - some of them quite large in size, 40-60m² (Bazarciuc 1984b, p.

6), multiple tool deposits and hoards (fibula, bracelets, necklaces, coral and amber beads, etc.), weapons, as well as three shattered burial tombs (Babeş 1994, p. 224-225), from which were recovered two bronze bracelets and a Latene-type bracelet (Bazarciuc 1986), p. 99).

Among the precious metal pieces, the most important is the famous golden diadem, with parallels in Greco-Scythian art. At the same time, a significant number of imports from the Mediterranean world, especially ceramics, have been discovered. The chronology of the fortress covers the 4th to 3th centuries BC.

The richness of the material saved during the excavations seems to suggest either a hurried abandonment of the fortress, or a destruction of it as a result of a siege, the locals having no time to save their wealth. Otherwise it can hardly be explained the abundance of the discovered inventory, especially precious metal. We ask ourselves whether the so-called „shattered inhumation graves” that are reported do not actually represent the remnants of some individuals killed during or as a result of a siege. Of course, such hypothesis would need to be confirmed by anthropological analysis.

In any case the fortress from Buneşti - Bobului Hill occupies a prominent position among similar contemporary monuments, an economic, political and military center of a tribal faction, probably the residence of a king (*basileus*) (Babeş 1994, p. 225).

3. 11. The fortress of Arsura (Vaslui County)

Situated only 2.5 km east from the fortress of Buneşti, the objective occupies partially the plateau called La Mogoşeşti (Coman 1980, p. 51), north of the village of Arsura, at the mouth of the Ruginos brook belonging to the Prut river basin, at an altitude of 325 - 275 m. Reconstruction of the plan raises many problems as the western sector is no longer visible on the ground, being largely destroyed by plantations of fruit trees and vines; even in the eastern sector, where the fortification elements are still somewhat preserved, they are very poorly visible. For these reasons, it is almost impossible to reconstruct at this time the precise plan of the fortification, which theoretically could have covered an area of 20-25 hectares (Pl. 7/2).

Small scale archaeological excavations were carried out in 1969 by S. Teodor. They addressed the fortification elements, bringing precious information about their nature. Thus, the almost fully flattened inner rampart is built of earth with a maximum preserved height of 1-1.10m. The adjacent ditch has a depth of 2 - 2.50 m (Teodor 1973, p. 53; Teodor 1994, p. 121; Turcu 2002, p. 17-18).

The second rampart (Pl. 9/2) presents a more complex structure: a wall made of stones bounded by earth and wood beams constitute a primary core over which a second core made of earth was erected. Above it there were numerous burning cluster of coals and burned adobes, probably the remains of a ramparts superstructure (Teodor 1973, p. 53; Teodor 1994, p. 121; Turcu 2002, p. 17-18).

The archaeological finds (ceramics) suggest a broad range between 4th-3rd centuries BC. Traces of the Poieneşti culture - Lukaševka were also discovered.

4. Discussions

As in other areas dominated by the historical Getae (Sîrbu 2002, p. 241), in the area analyzed by us we observe the association of significant monuments: fortresses, treasures of precious metals, and as we have pointed out, perhaps tumular necropolis (Movileni, Alexeni) adjacent to certain forts (Criveşti and Poiana Mănăstirii).

In the analyzed area, we have 11 fortresses, 8 of them almost certainly dated in period between 4th – 3rd centuries BC. Of the 11 objectives, six have benefited from archaeological investigations, only two of them being excavated during several campaigns (Răducăneni and Bunești Averești).

No.	Name	Enclosures	Size	Fortification Elements	Dating	Archaeological Diggings	Traces of Fire / destruction
1	Crivești	1	2,5 ha	Rampart and ditch	4-3 BC	-	?
2	Oțeleni / Bîra	3 (?)	11 ha	Rampart and ditch	4-3 BC	Test diggings	?
3	Poienile (?)	(?)	10 ha	Rampart and ditch	4-3 BC (?)	-	?
4	Poiana Mănăstirii	2	>15 ha	Rampart and ditch	4-3 BC	Test diggings	Yes
5	Mogoșești (?)	?	?	Ditch (?)	4-3 BC	-	?
6	Poiana cu Cetate (?)	1	0,50 ha	Rampart and ditch	4-3 BC (?)	-	?
7	Dobrovăț	2 (?)	> 0,77 ha	Rampart and ditch	4-3 BC	-	?
8	Răducăneni	1	2 ha	Rampart and ditch	4-3 BC	Systematic Diggings	?
9	Moșna	1	12 ha	Rampart and ditch	3-2 BC	Systematic Diggings	Yes
10	Bunești	1	2,7 ha	Rampart	4-3 BC	Systematic Diggings	Yes
11	Arsura	2	~20-25 ha	Rampart and ditch	4-3 BC	Test diggings	Yes

In terms of general characteristics, we could distinguish three groups of forts. A first group would comprise the very modest-sized forts under one hectare, represented by two objectives (Poiana cu Cetate and Dobrovăț). Since the chronology of the first fortress is uncertain and the second is poorly preserved, we cannot discuss their possible connections.

The second group would be the middle-sized fortress, with areas ranging from 2 to 2,7 ha. Incidentally or not, they are quite similar in shape - quasi-quadrilateral, with rounded corners - but also in positioning: they occupy secondary plateaus, generally sheltered from the strong winds. At the same time, where excavations were made (Bunești and Răducăneni), there was found a rather high density of habitation. The current state of knowledge does not allow us to speculate too much on their function, but we believe that these smaller fortifications may well have functioned as residential and economical centers.

A third category could be represented by larger fortresses with areas between 10 and 20-25 ha. They generally have irregular shapes adapted to the terrain. They are built on large, tall structural plateaus that offer a very good visibility. Where there were excavations or magnetometric prospections (Poiana Monastery, Moșna, Arsura), there was not found a very high density of dwelling. As we have already pointed out, and on other occasions when we discussed other Eastern Carpathian Iron Age Forts (Berzovan 2018, p. 327), the presence of "empty spaces" within the

fortified enclosures is not a rare situation at all. They could have been used for agriculture, the sheltering of domestic animals, the protection of food supplies being necessary in a period characterized by frequent military conflicts. It may well be that some of these forts were also used as places of refuge for communities living in adjacent settlements during times of need, perhaps also serving as places used for various events and ceremonies.

Interesting is the presence of the large mound in the fortress of Moșna. The situation is not unique in the space between the Carpathians and the Prut: two smaller tumuli are also present in the B enclosure of Cotnari-Cătălina fortress (Berzovan 2018, p. 327). Certainly they cannot be simple points of observation, as sometimes considered, for the simple reason that a military observatory does not justify such an effort involving the displacement of such a large amount of earth. We ask ourselves whether these tumuli could have been the tombs of the founders of the fortress, or to some heroic ancestors. For other cultural spaces in Antiquity we have such situations attested (Fernandez-Götz 2014, p. 121-122). However, in our case, in the absence of diggings, the question remains open.

The construction and maintenance of large forts could not have been achieved without a well-established infrastructure. Some of the forts also seem to be economic centers. Thus, in the fortress of Bunești there appeared to have been a workshop for iron processing, proved not only by the existence of slag, but also by forging pliers (Pl. 10/5), punches, and pushes (Bazarciuc 1984a, p. 170). In the case of the fort of Răducăneni, it is assumed the existence of a metallurgical workshop (Merlan 2010b, p. 5). The presence of tools (axes of various types, etc.) attests the practice of different types of crafts (Pl. 10/1-2, 6-12).

It is possible that there was a workshop in Bunești, also judging by the large number of adornments (Pl. 11/4-10)- especially the Thracian-type phibulae (Bazarciuc 1981, p. 563-570; Măndescu 2003, p. 23-25) found here.

Did these communities produce their own local coinage? In the fortress of Bunești we know five pieces of Huși-Vovriești type coins associated with a deposit of iron tools and a Thracian-type phibulae; seven additional isolated pieces were found in the cultural layer (Munteanu, Chiriac 2016, p. 563). If archeologists generally attribute these coins to the locale Getian population (Teodor 1999, p. 43; Măndescu 2010, p. 375; Rustoiu, Ferencz 2017, p. 351 and others), numismatists generally tend to attribute them to Celts and Bastarnae (Mihăilescu - Bîrliaba 1990, p. 71-74; see the detailed discussion at Munteanu, Chiriac 2016, p. 549-551). Judging by their distribution area but also their association with local artifacts that clearly indicate their dating during the 3rd century BC, as well as their absence from the Celtic or Bastarnae contexts, we consider at this moment the first hypothesis to be much more plausible. In any case, until new discoveries or studies are made, the issue remains open.

The economic richness of the local communities is reflected in the large number of imports, visible in almost all archaeological objectives investigated in our area of interest. Trade with the Mediterranean world began in the East Carpathian area as early as the 6th century BC (Teodor 1984, p. 158) and reaches the apogee between the 4th and 3rd centuries BC. In Bunești fortress we have polychrome glass beads, glass beads with human face (Pl. 11/2-3), luxury Greek ceramics, amphorae from Thasos, Sinope, Pontic Heraclea, Cos, Rhodes, fragments of oenochoe, askos, amphorae, kantharos, a statue, but also Histrian drachmas (Teodor 1984, p.160). Fragments of Hellenistic amphorae of various types were also found in the fortress of Poiana Mănăstirii (Berzovan 2016, pp. 220-221), together with a bead made of colored glass. In fact, in all investigated settlements - either fortresses or not - we can find fragments of Greek Amphorae of various sorts.

Equally important are the connections with the Central European Celtic world (Teodor 1988, p. 49). In Bunești were found eight Latene type phibulae (seven type B2 and one C1 type), as well as a sword bucket (Babeș 1994, p. 224). If coins of the Huși - Vovriești type really belong to the Eastern Carpathian Getae, their presence in the eastern part of the Pannonian Plain and in the Scordiscian area may be an additional argument for the scale of these connections (Rustoiu, Ferencz 2017, p. 350).

Indirect connections also existed with much more distant spaces. Treasures such as the one discovered in 1982 that contained a necklace made of 75 amber beads, a necklace made of 70 corals, two bitronconic pearls made of gold leaf, two spiral wreaths of silver wire ending with snakes' protomes, two Kauri shells and another bronze piece (Bazarciuc 1984a, p. 172) attest to trade links with distant geographical and cultural districts from the north and east.

The gold diadem (Pl. 11/1)- a piece of great artistic value - is a testimony to the refined artistic tastes of the elites who controlled this area. The piece was made using gold alloys with different compositions suitable for the purpose, the body being made of 22 carat gold, while the endings were made of 23,5 carat gold, while for the soldering was used 20-21 carat gold with a lot of silver (Stan, Constantinescu 2014, pp. 672-673). These technical and metallurgical aspects indicate the execution of the work by a specialized craftsman, well familiarized with the technology of the Hellenistic world.

This relative economic prosperity is in sharp contrast to the local resources that are rather modest. Raw materials such as iron, bronze, and silver had to be imported (from the Carpathians, the Balkans, or the East), and Hellenic imports in their turn had to be paid. Agricultural products, fur, honey could only cover part of these costs. In this context, we can ask ourselves, what were the sources that supported the local economic development?

An activity that could have brought some revenues could have been represented by taxing the commercial roads: in the area we have two main access roads, the Prut Valley and the Siret Valley, used as such from ancient times to historical periods. Another route that could easily be controlled was that of the Bahlui Valley.

We cannot neglect the potential income brought by mercenaries nor the importance of the slave trade in which, as indirectly evidenced by the sources (Strabon, *Geōgraphiká*, VII, 3, 12), the Getae were probably involved as major suppliers. Slave trade could have brought in significant revenues; unfortunately it represents an activity that is very difficult to document „archaeologically”.

A delicate problem, difficult to solve at this stage of knowledge, is represented by the end of these forts. The chronology of most of them - where it could be reliably established - indicates, as in many other cases in the East Carpathian region, an ending in the last quarter of the 3rd century BC. Where excavations have been carried out, there have been reports of destruction through fire. This could be related to the arrival of the bearers of the Poenești - Lukasevka culture in the area, identified by most historians with the historical warrior tribes of the Bastarnae. The presence of sporadic traces of this culture in forts such Moșna, Arsura, Poiana Monastery might prove relevant in this respect.

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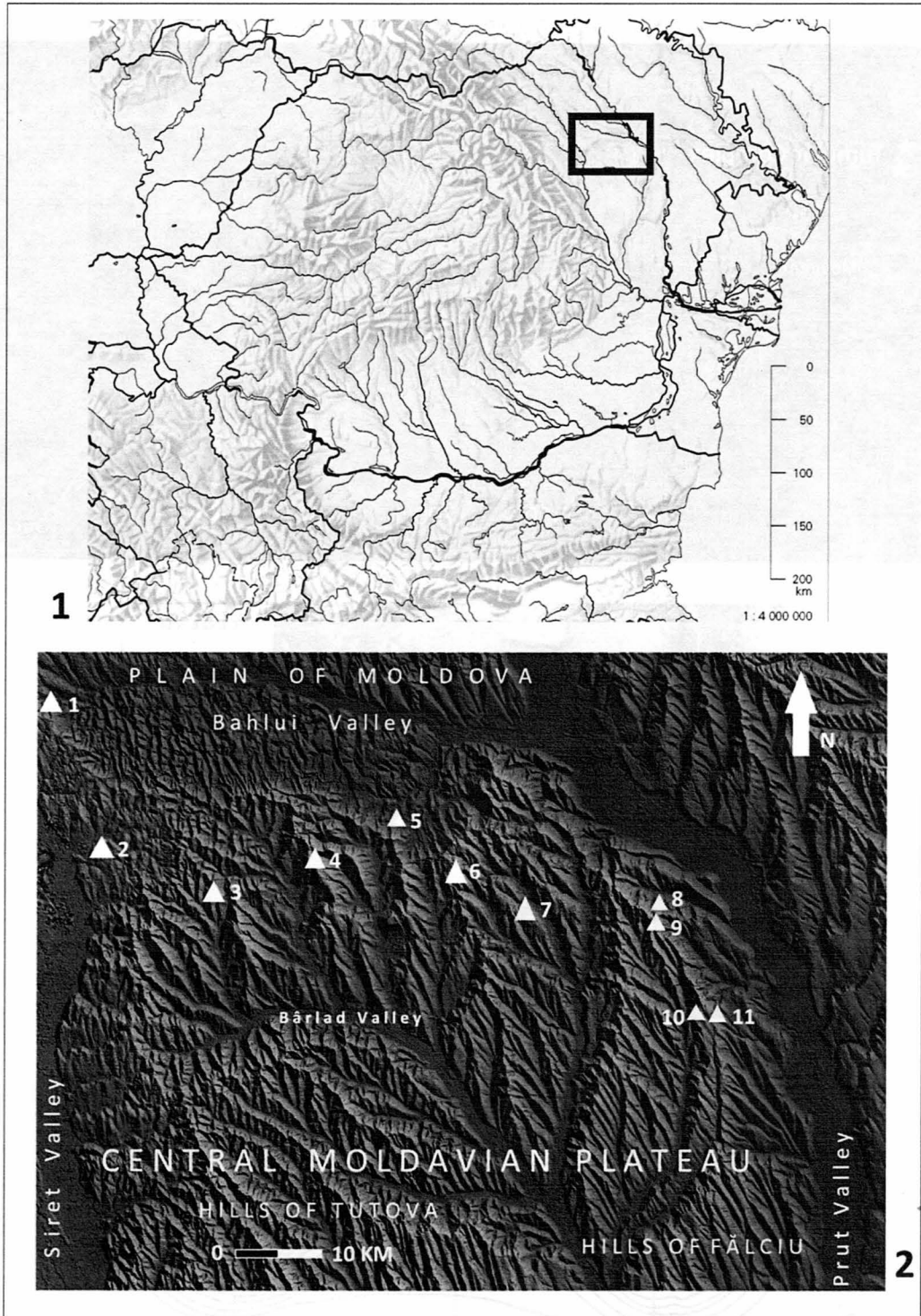
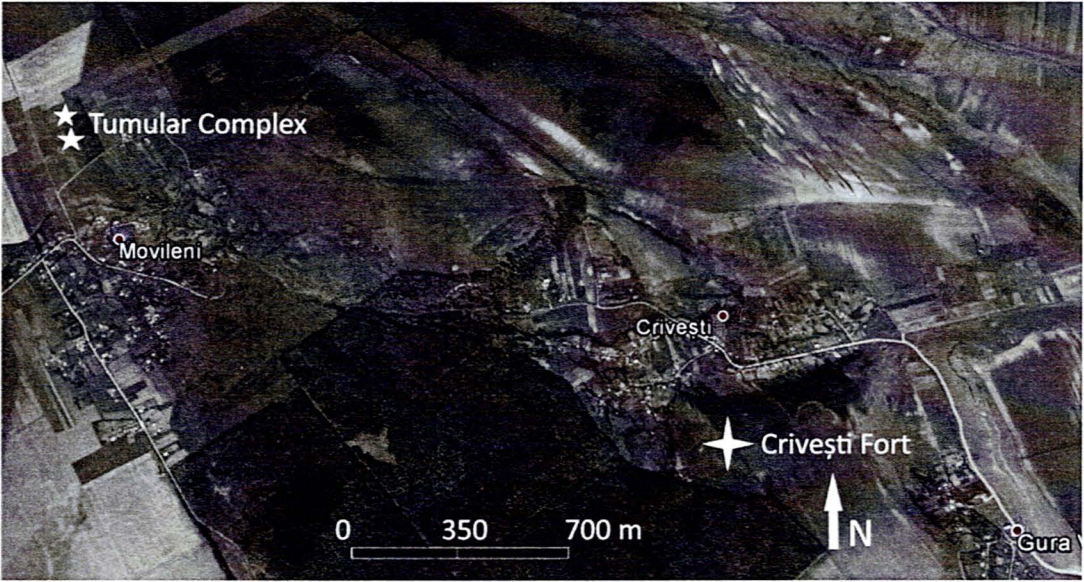
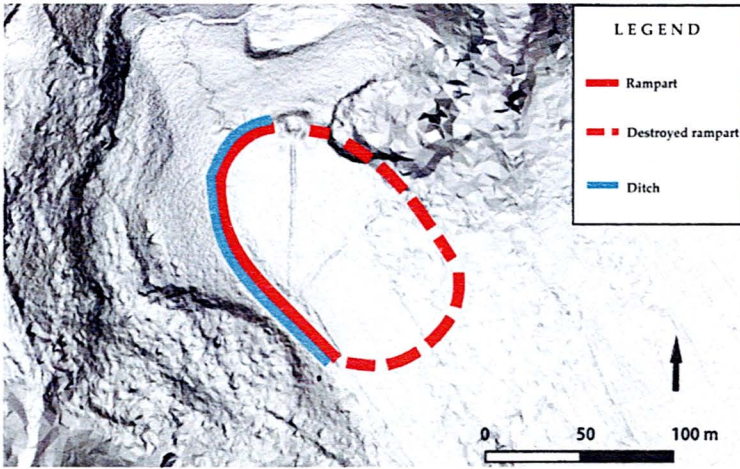


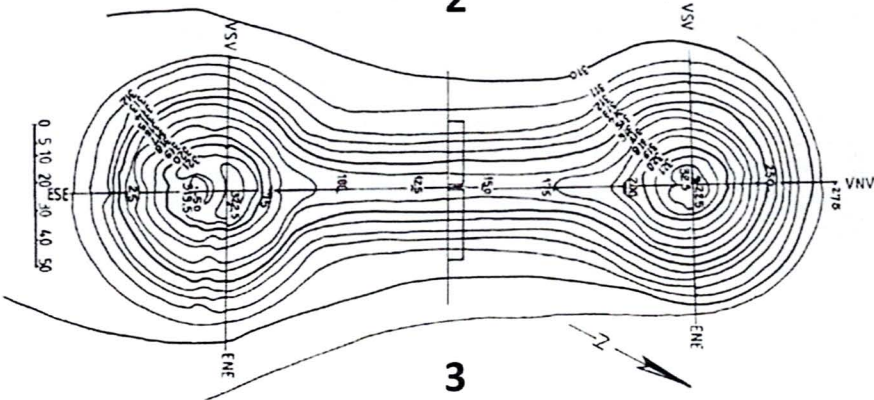
Plate 1. 1. The Northern Balkans with the location of the studied area. 2. General map of the studied area with the objectives: 1. Crivești fort; 2. Oțeleni / Bâra fort; 3. Poienile fort; 4. Poiana Mănăstirii fort; 5. Mogoșești; 6. Poiana cu Cetate fort; 7. Dobrovăț fort; 8. Răducăneni fort; 9. Moșna fort; 10. Bunești fort; 11. Arsura fort.



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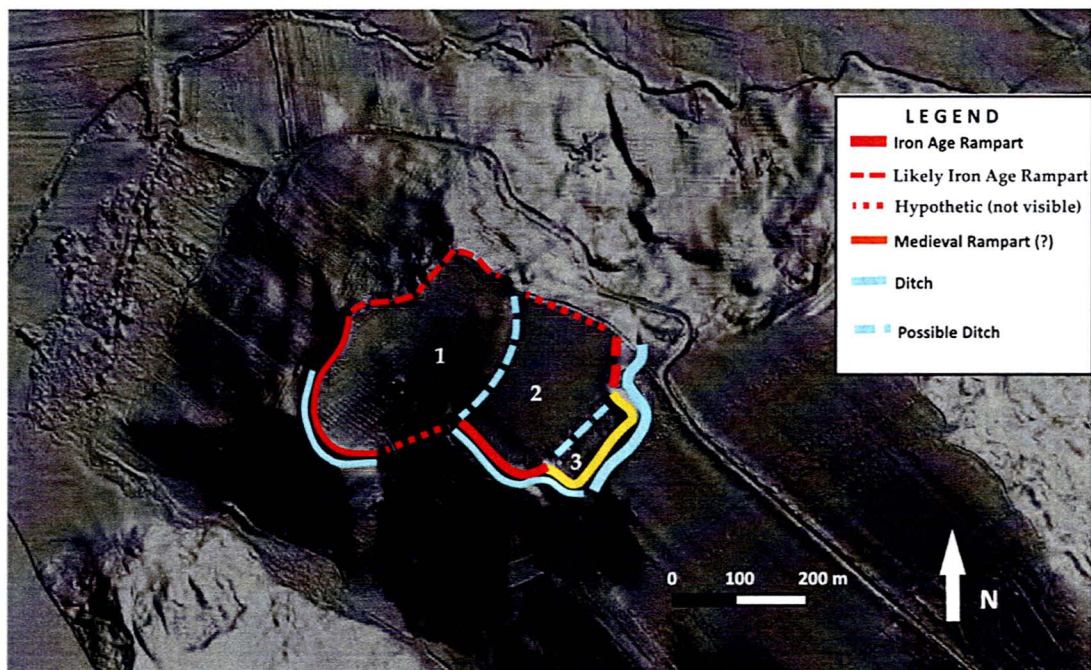


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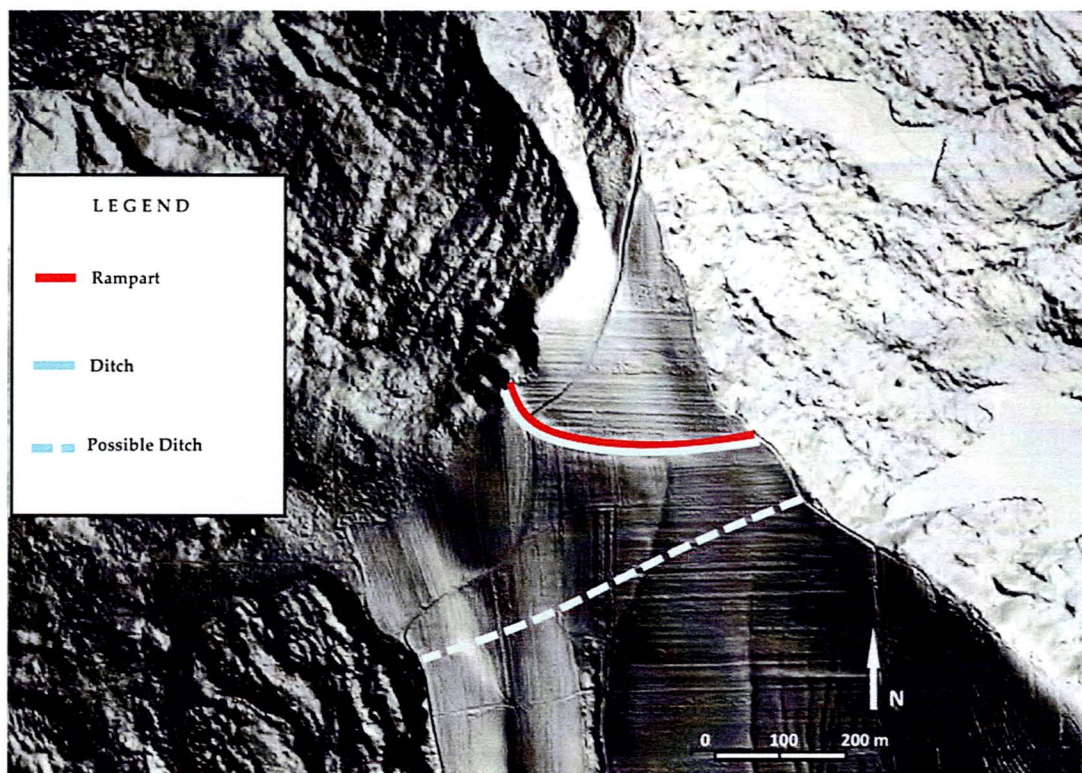


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Plate 2. 1. The Crivești Fort and the Tumular Complex of Movileni (Google Earth satellite image); 2. Plan of the Crivești Fort; 3. The tumular complex of Movileni (after Ursulescu et alii 2001).

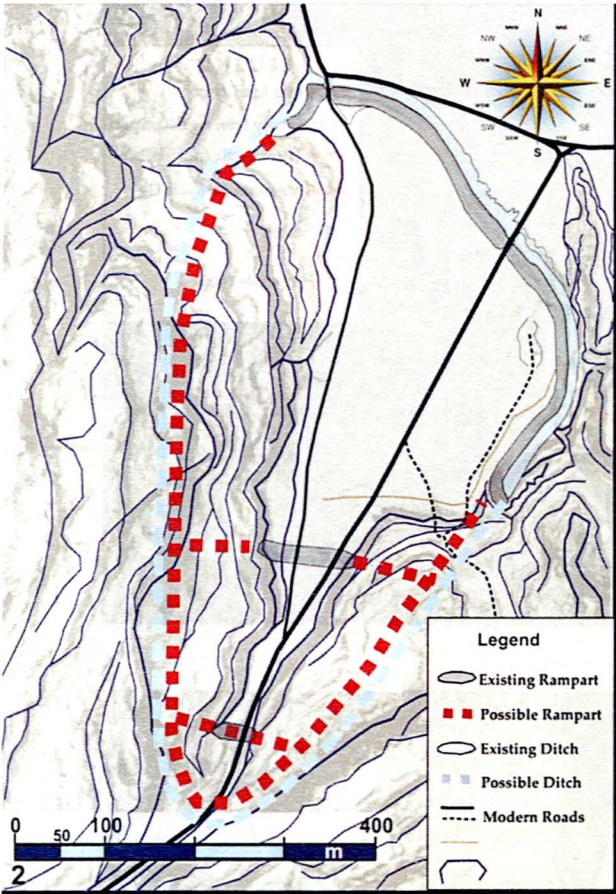


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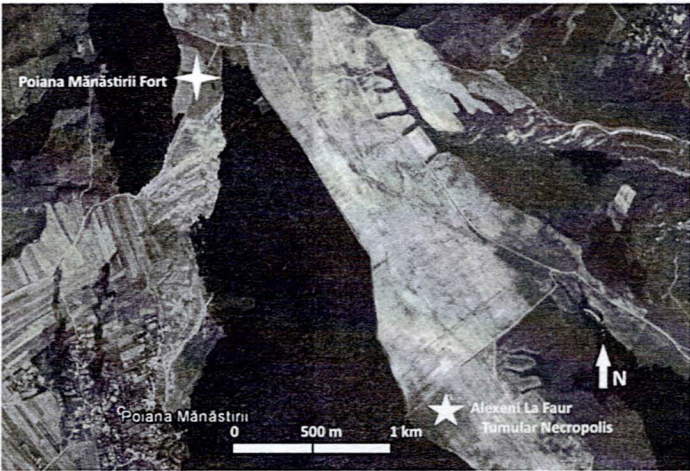
Plate 3. 1. Plan of the Oțeleni / Bâra fort; 2. Plan of the Poienile fort.



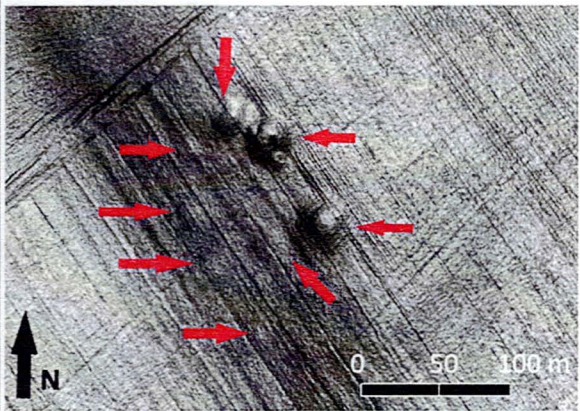
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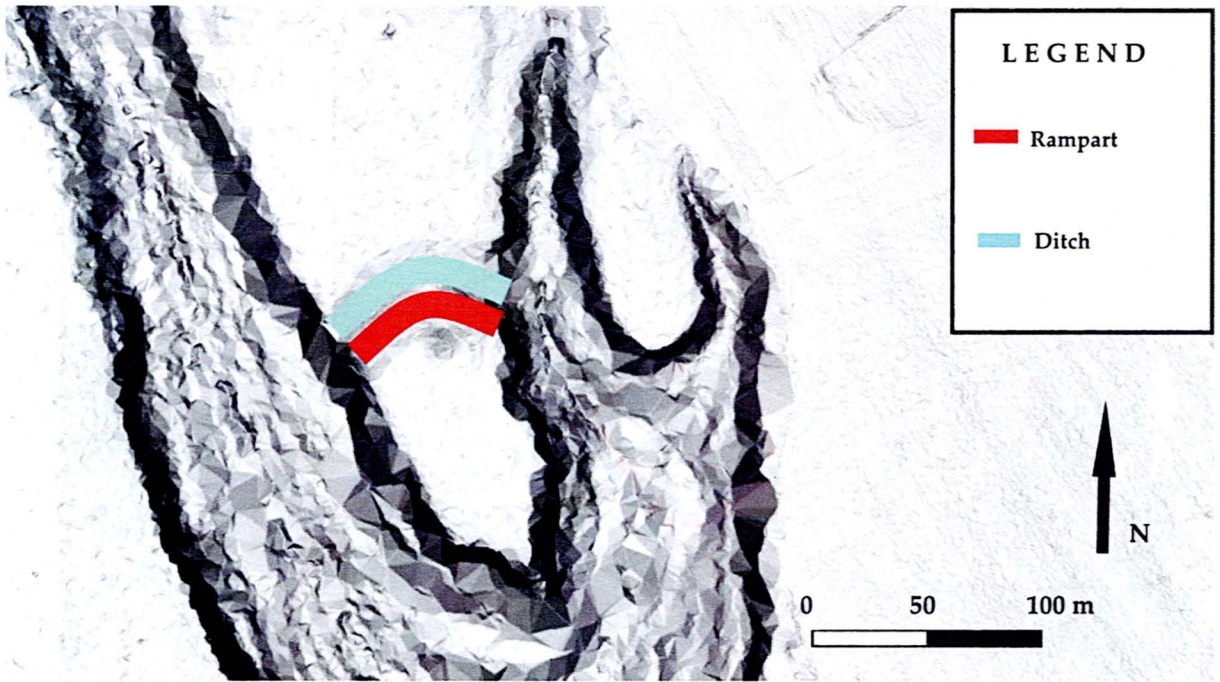


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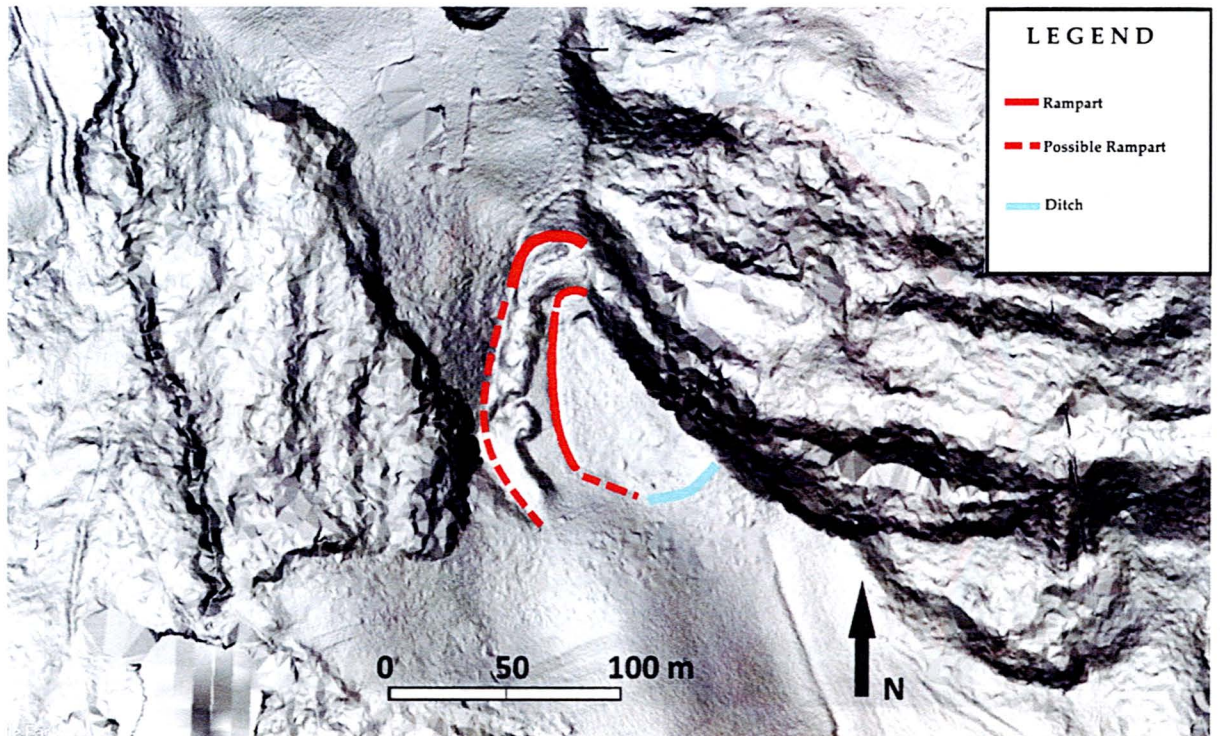


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Plate 4. 1. Plan of the Poiana Mănăstirii fort; 2. The results of the magnetometric prospections in the Poiana Mănăstirii fort; 3. Poiana Mănăstirii fort and Alexeni - La Faur tumular necropolis; 4. Alexeni - La Faur tumular necropolis.

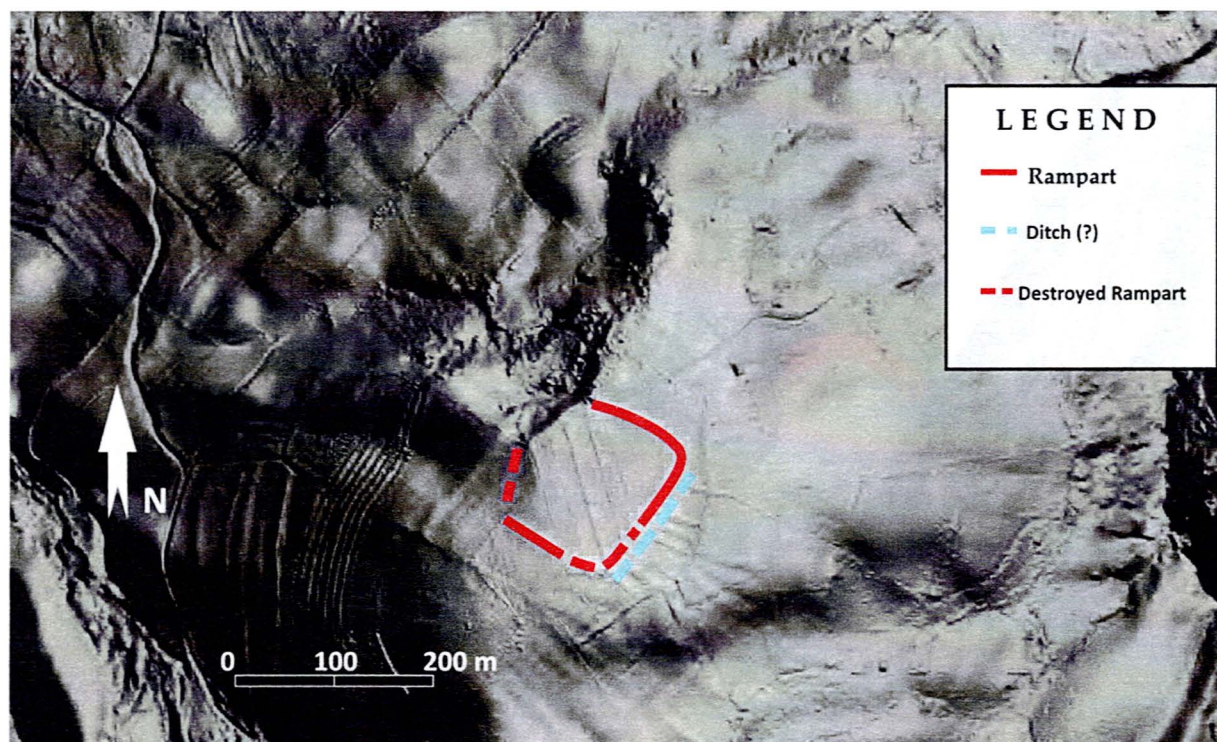


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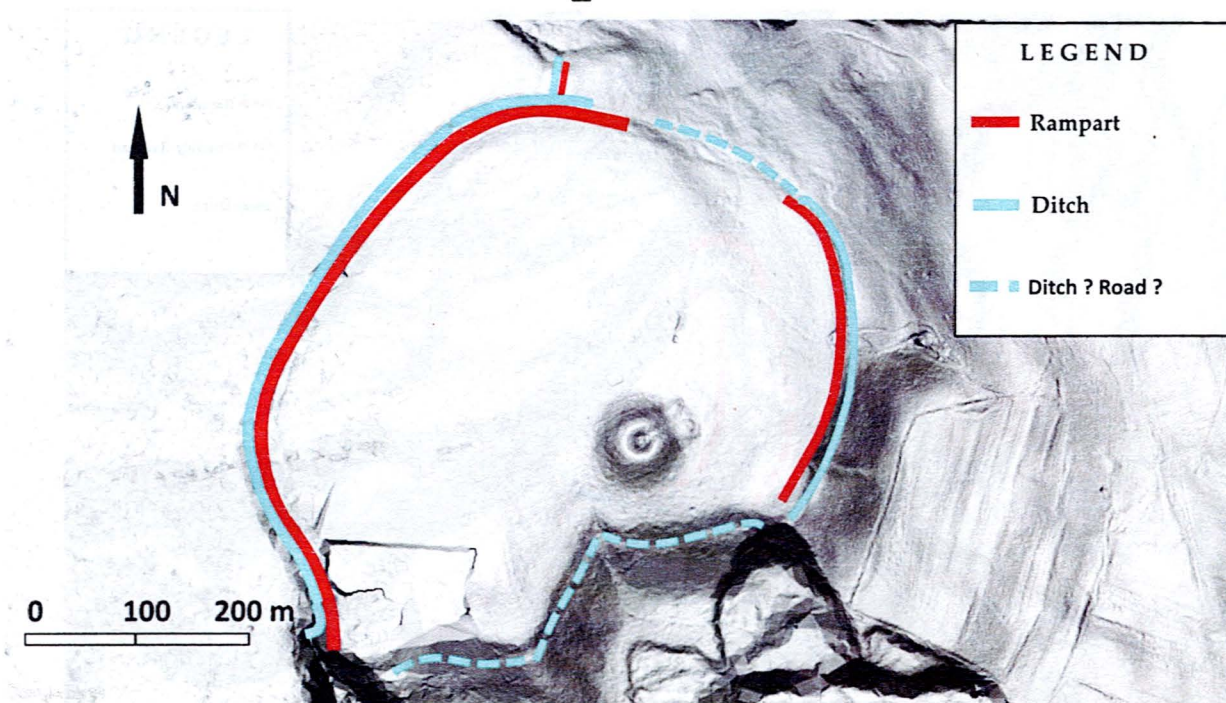


2

Plate 5. 1. Plan of Poiana cu Cetate fort; 2. Plan of Dobrovăț fort.

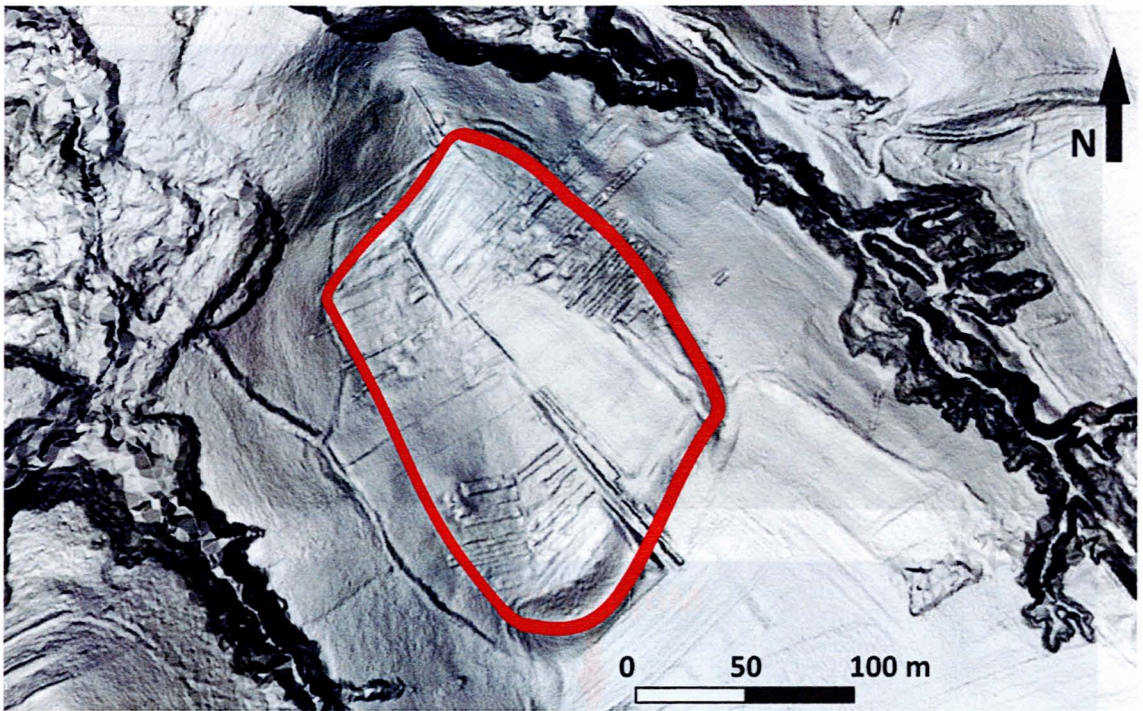


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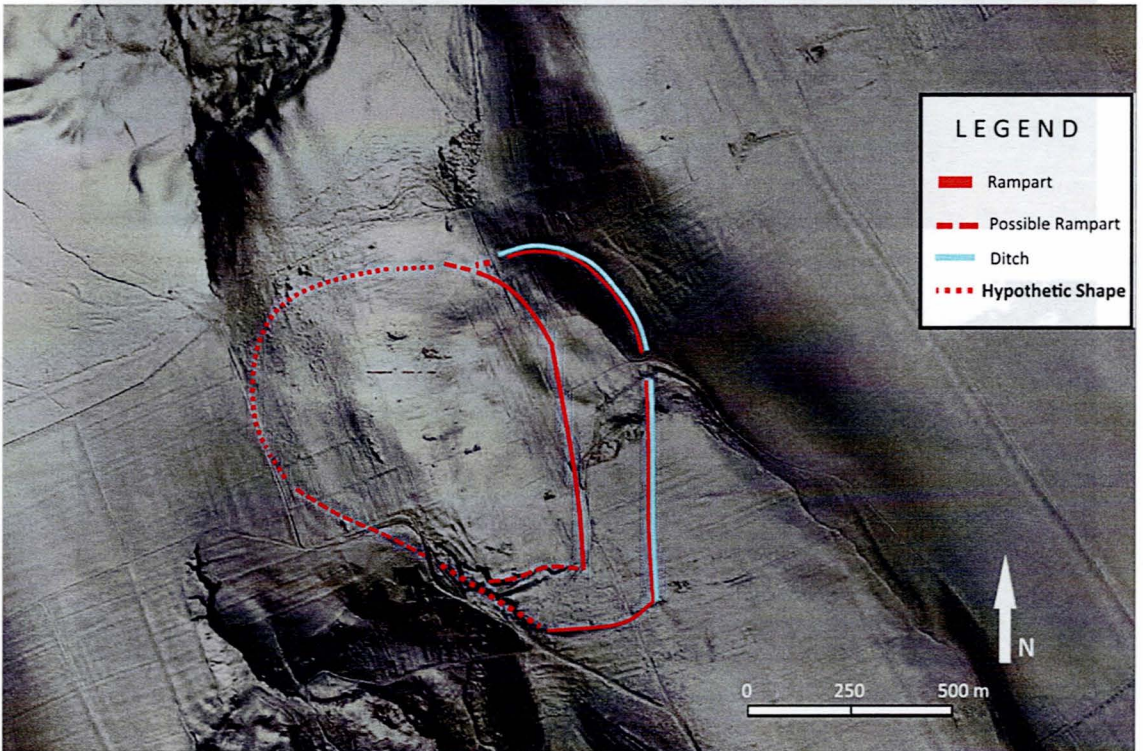


2

Plate 6. 1. Plan of the Răducăneni fort; 2. Plan of Moșna fort.



1

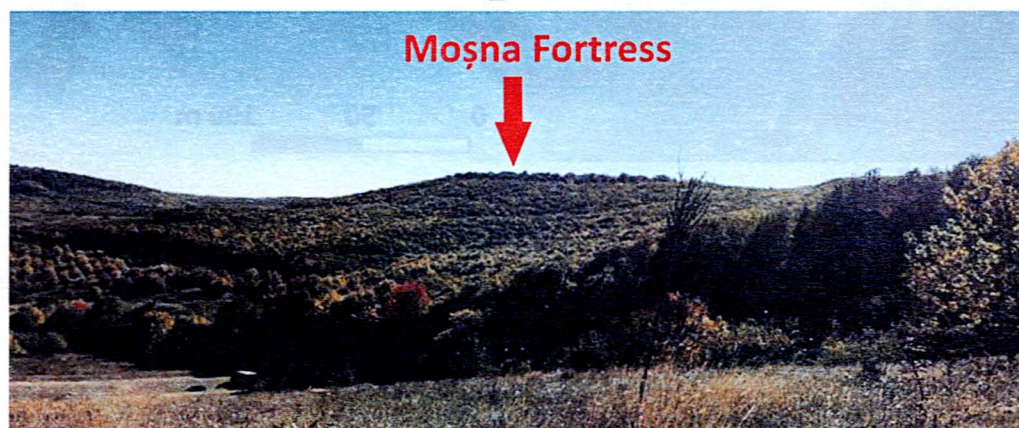


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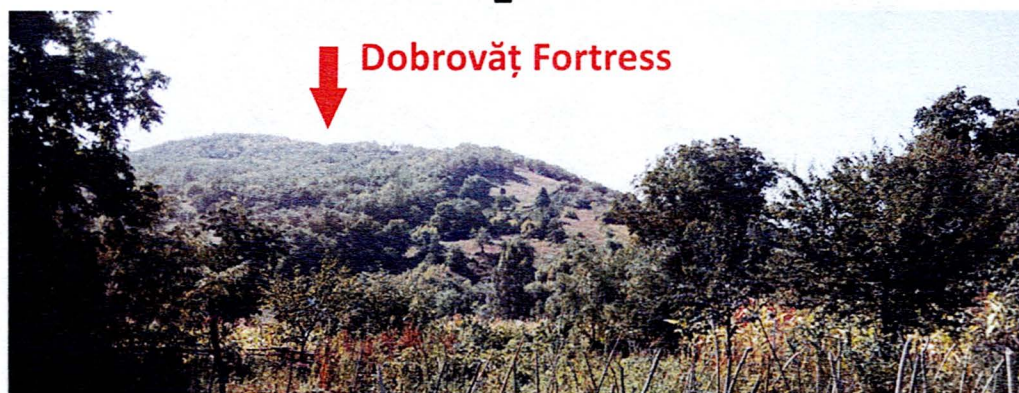
Plate 7.1. Plan of the Bunesti fort; 2. Plan of the Arsura fort.



1

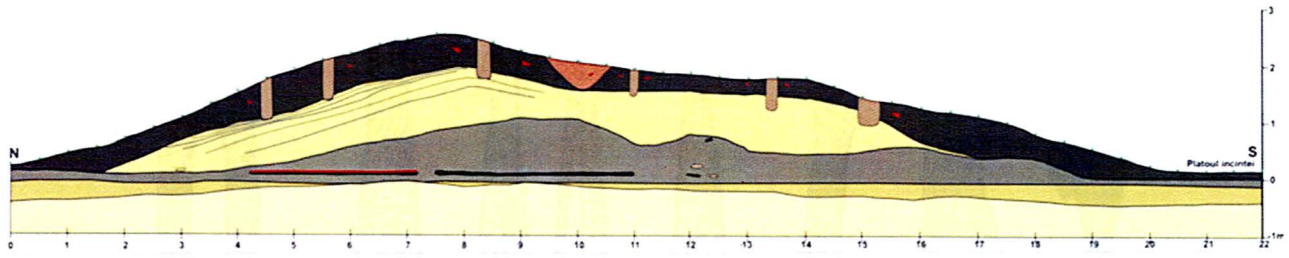


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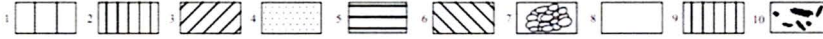
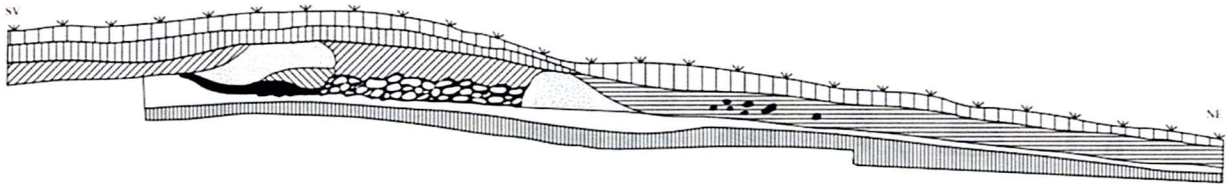
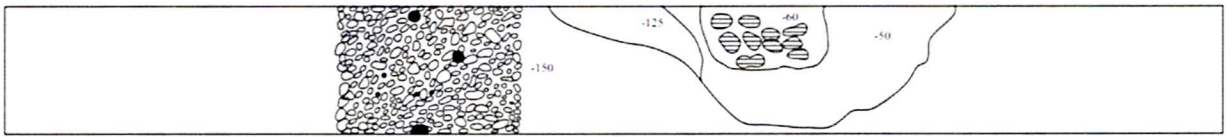


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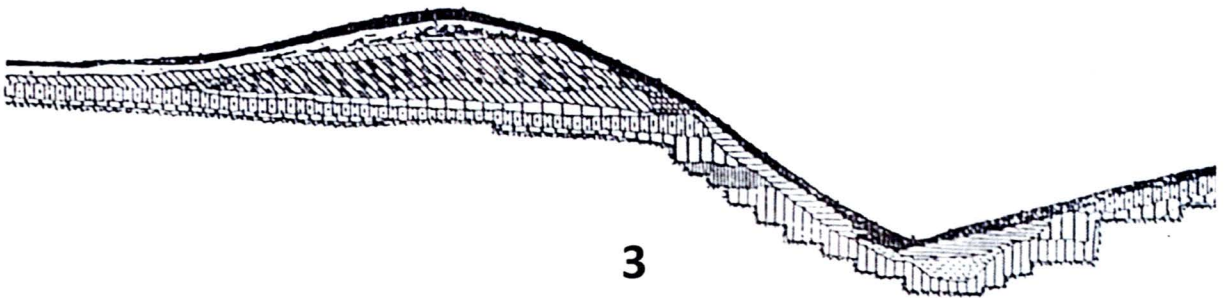
Plate 8. 1. The Poiana Mănăstirii fortress hill viewed from Domnița village (photo by S. C. Enea). **2.** Photo of Moșna fortress hill (photo by C. Lăpușeanu); **3.** Photo of Dobrovăț fortress hill (photo by A. Berzovan).



1



2



3

Plate 9. 1. The defensive rampart of Poiana Mănăstirii fortress. **2.** The second defensive rampart of Arsura fortress (after Zanoci 2011); **3.** The defensive rampart and ditch of Moșna fortress (after Teodor 1999).

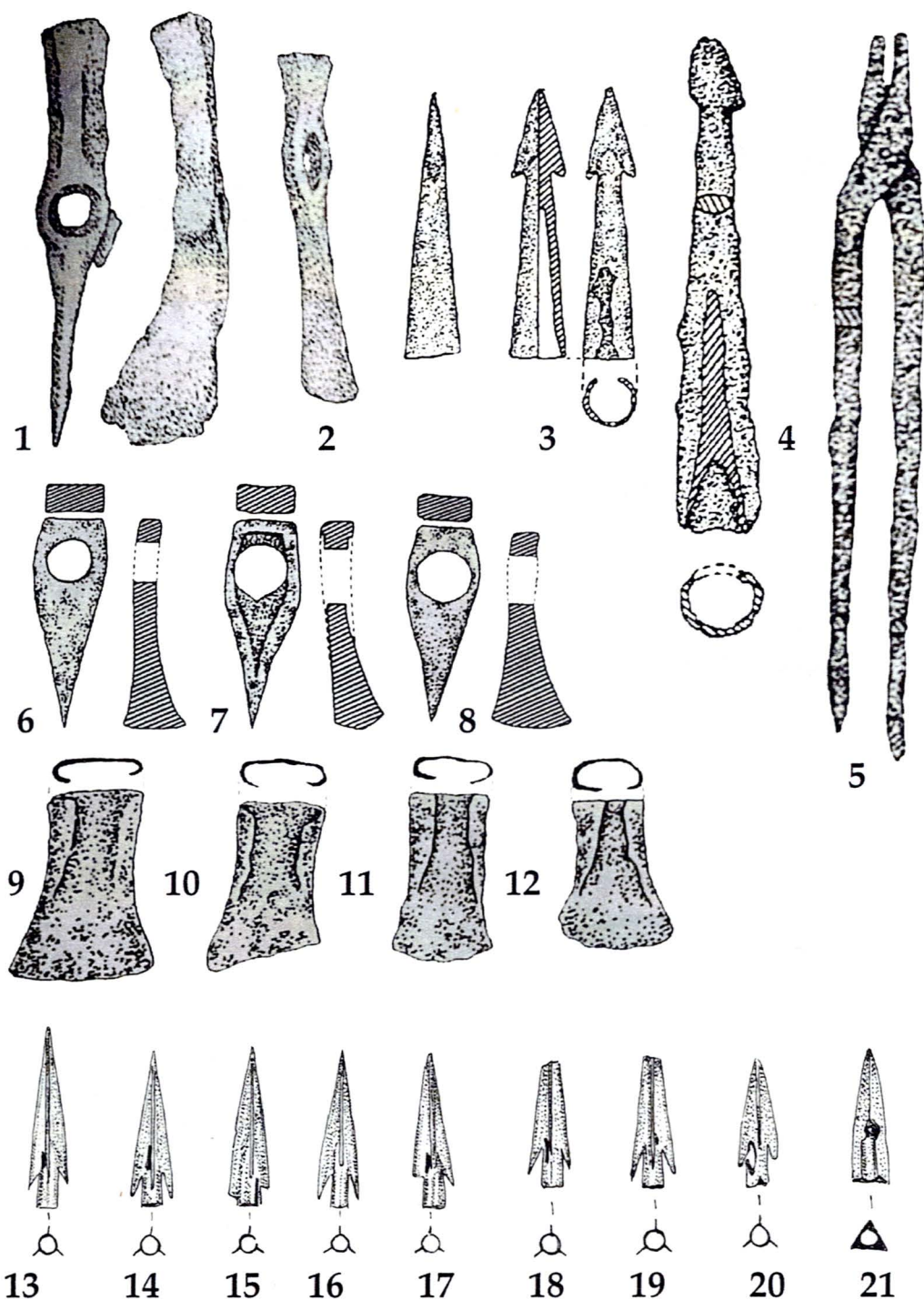


Plate 10. Various tools and weapons found in the forts. 1-2, 6-12. Iron axes from Bunești fort (after Teodor 1999); 3-4. Iron weapons found in the Bunești fort (after Teodor 1999); 5. Iron pliers found in the Bunești fort (after Teodor 1999); 13-21. Various bronze „Scythian”-type arrowheads found in the Răducăneni fort (drawings by Romeo Ionescu).



Plate 11. 1. The golden diadem of Bunești fort (after Bazarciuc 1984a); 2-3. Glass beads with human face found in the Bunești fort (photo after www.cimec.ro); 4-10. Various types of silver bracelets and phibulae found in the Bunești Fort (photo after www.cimec.ro); 11. Bronze shackle with nodes found in the Poiana Mănăstirii fort (after Berzovan 2016).