

## AN EARLY IRON AGE FORTIFIED SETTLEMENT AT MOLDOVENEȘTI (CLUJ COUNTY)

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(Abstract)

The archaeological site from *Fluierişte – Șanțul Păgânilor* near Moldovenești (Hungarian: *Várfalva*), Cluj County, is located right where the Arieș River exits the Trascău Mountains, at the border between the Transylvanian Plateau and the Western Carpathians. Its position on a naturally well-defined promontory, where access can be easily controlled, made it an ideal location for establishing a large fortification.

The first mentions of this site date back to the 19<sup>th</sup> century, when pottery fragments, stone and bronze tools, as well as defensive works were identified. Over time, several researchers have contributed with a series of observations regarding this site, but only the investigations carried out in recent years allowed a clearer assessment of the site's size and characteristics.

Based on the latest investigations, during the main occupation phase an area of around 20 hectares was fortified, as the promontory was blocked by an imposing east-west oriented, meandering rampart that reaches up to 3 m in height to this day. The presence of other ramparts and ditches suggests that important reconfigurations of the defended area took place, indicating a possible long-term (re)occupation of the Fluierişte Plateau.

These characteristics, together with the archaeological material mentioned in the literature or that observed in the field (especially pottery fragments specific to the Gáva culture) indicate that a large, fortified settlement functioned here during the Early Hallstatt period (12<sup>th</sup>–8<sup>th</sup> centuries BC). Its dominant position and access to resources may indicate that this settlement may have had an important status during said period. This seems to be reinforced by the fact that many bronze hoards have been found in the vicinity of this area.

There is certain information that the plateau was occupied after and, possibly, even before the early Hallstatt period, but the extent of these occupation phases remains to be determined.

### *General framework*<sup>1</sup>

Located at the border between the Transylvanian Plateau and the Western Carpathians, right where the Arieș River exits the mountains, the village of Moldovenești from Cluj County has held significant strategic importance over time<sup>2</sup> (Fig. 1/A-B; Fig. 2).

One of the key factors that contributed to the wealth of archaeological findings at Moldovenești (Hungarian: *Várfalva*) is the general topographical layout of the area. West of the Turda-Aiud Corridor, a prominent feature of the landscape is a group of hills known as the Măhăceni Plateau, a natural extension of the Trascău Mountains to

the east. This is an area with steep slopes and it is fragmented by numerous secondary valleys. The only easily accessible route from this direction towards the mineral-rich area of the so-called Golden Quadrilateral of the Apuseni Mountains is found along the Arieș Valley<sup>3</sup>. At Moldovenești, this route is confined by the Hășdate Ridge to the north and the Trascău Mountains to the south, making the Arieș Valley a gateway to the mining region throughout history<sup>4</sup>.

The archaeological site that is the subject of this paper is located about 1 km west of the village of Moldovenești and approximately 0.5 km south of the Arieș River, on the broad plateau of a massive promontory that faces the Arieș. This plateau, known as *Fluierişte* (Hungarian: *Fütyerl/Fütyör/Fütör*), is bordered by fairly steep slopes on the west, east, and north sides, with the only more accessible side being to the south-southeast,

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<sup>2</sup> Ujvári 1972, 305–307; Popescu-Argeșel 1987, 485–490; RepCj, 280–285.

<sup>3</sup> RepCj, 280–285; Borcoș *et alii*. 1983, Fig. 16, 17; Borcoș *et alii*. 1984, 109–113.

<sup>4</sup> Horedt 1958, 132–145; Horedt 1986, 111–136.

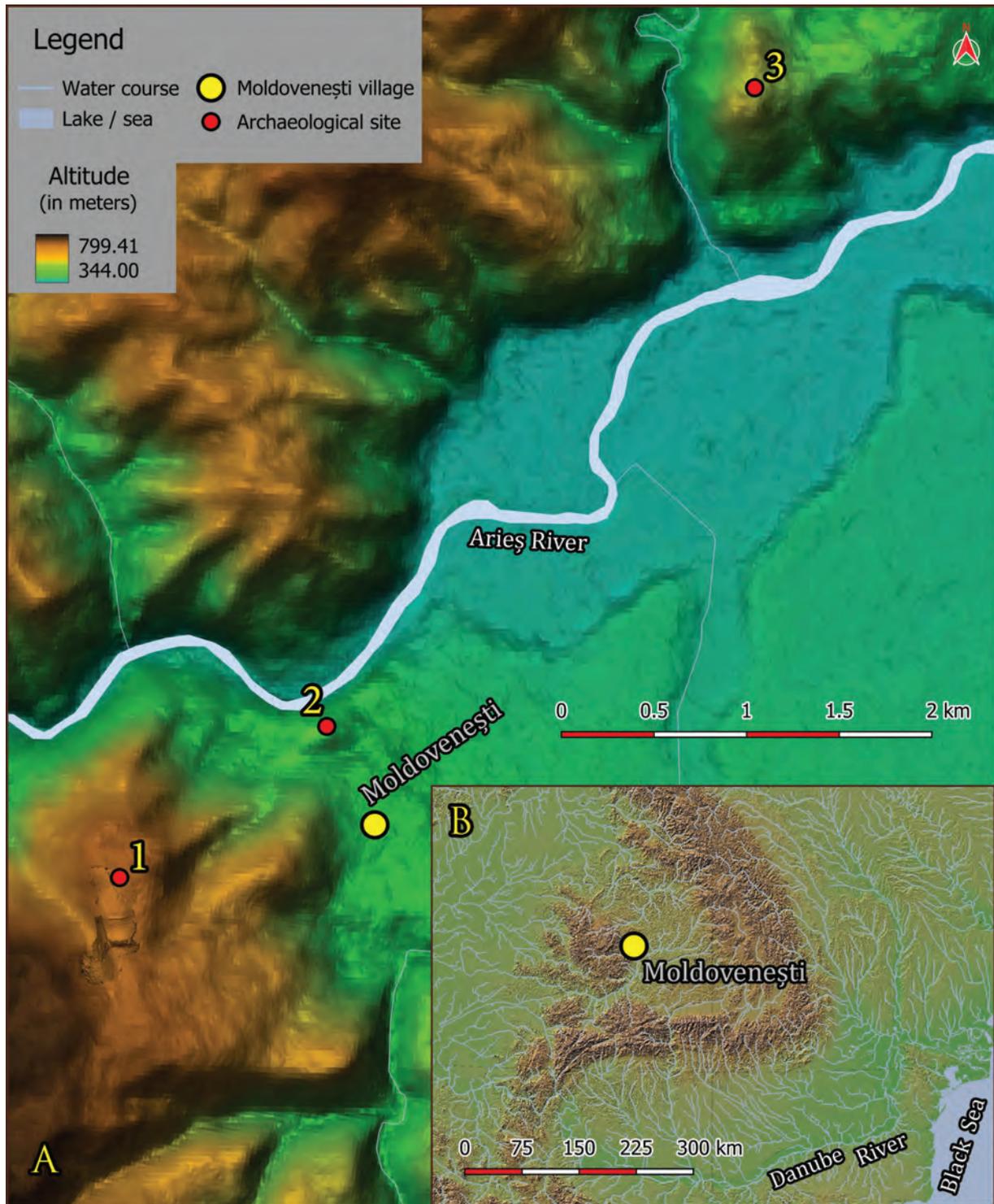


Fig. 1. Digital Elevation Models: A – Key sites referenced in this paper: 1 – Fluierişte – Şanţul Păgânilor Plateau; 2 – Turda Fortress; 3 – Cetatea Babei hillfort (Hungarian: Bábavára; possibly identical with Cetatea Fetei); B – Location of the village of Moldoveneşti.

towards the *Dracului Valley* (Fig. 1/A/1; Fig. 2/1; Pl. I–III).

In the second half of the 19<sup>th</sup> century and the early 20<sup>th</sup> century, numerous findings were reported at this location, suggesting the presence of an important archaeological site with a rich

archaeological inventory<sup>5</sup>. Despite this, no further research was undertaken in the decades that followed, and the data has been only vaguely mentioned in later academic literature. Thus, in Márton

<sup>5</sup> Neigebaur 1851, 197; Gooss 1876, 60; Orbán 1871, 174–185; Téglás 1887, 84–85; Orosz 1903, 93; Bajusz 2005, 47–48, 409–430.

Roska's *Archaeological Repertory of Transylvania* (*Erdély régészeti repertoriuma I. Öskor*), the findings from Moldovenești are briefly listed without much detail regarding their location or dating<sup>6</sup>. In the *Archaeological Repertory of Cluj County* (*Repertoriul arheologic al județului Cluj*), as well as in the *National Archaeological Repertory* (*Repertoriul Arheologic Național*) and the *List of Historical Monuments* (*Lista Monumentelor Istorice*), the site is mentioned only in relation to uncertain discoveries from the Neolithic or Early Bronze Age<sup>7</sup>. Through the present study we aim to clarify, as much as possible, the nature of this site by correlating information from the available literature with data collected through surface surveying.

### *The History of research*

The earliest written reference to this site dates back to the mid-19<sup>th</sup> century, in Johann Ferdinand Neugebauer's description of antiquities in *Dacia*<sup>8</sup>. At that time, the author noted that about half an hour west of *Cetății Hill* in Moldovenești (Hungarian: *Várhegy*), on a higher hill called *Fütör*, fragments of coarse ware were frequently found. In 1847,

Anton Kurz collected numerous such fragments, which reflected a wide variety of vessel types<sup>9</sup>.

Further information about this site was provided two decades later by Baron Orbán Balázs, who conducted a series of investigations in this area for his monumental work *The Description of Székely Land* (*A Székelyföld leírása*)<sup>10</sup>.

On this occasion, Orbán Balázs produced a topographic sketch of the rampart which marks the southern limit of the fortified area and noted the scale of the defensive works, which he associated with the *Turda Fortress* (Hungarian: *Tordavár*)<sup>11</sup> (Pl. XIII/1). It must be stressed that, on one hand, this interpretation was based on the fact that the medieval documents indicated the existence of the Turda Fortress in the Moldovenești area. On the other hand, it was based on the assumption that the fortification on Cetății Hill, located just north of Moldovenești, dated back to the Roman period<sup>12</sup>. In the meantime, archaeological excavations conducted on Cetății Hill have shown that, although many Roman-era materials were reused in the construction of the fortification, the structure itself dates to the 11<sup>th</sup>–13<sup>th</sup> centuries AD. This time

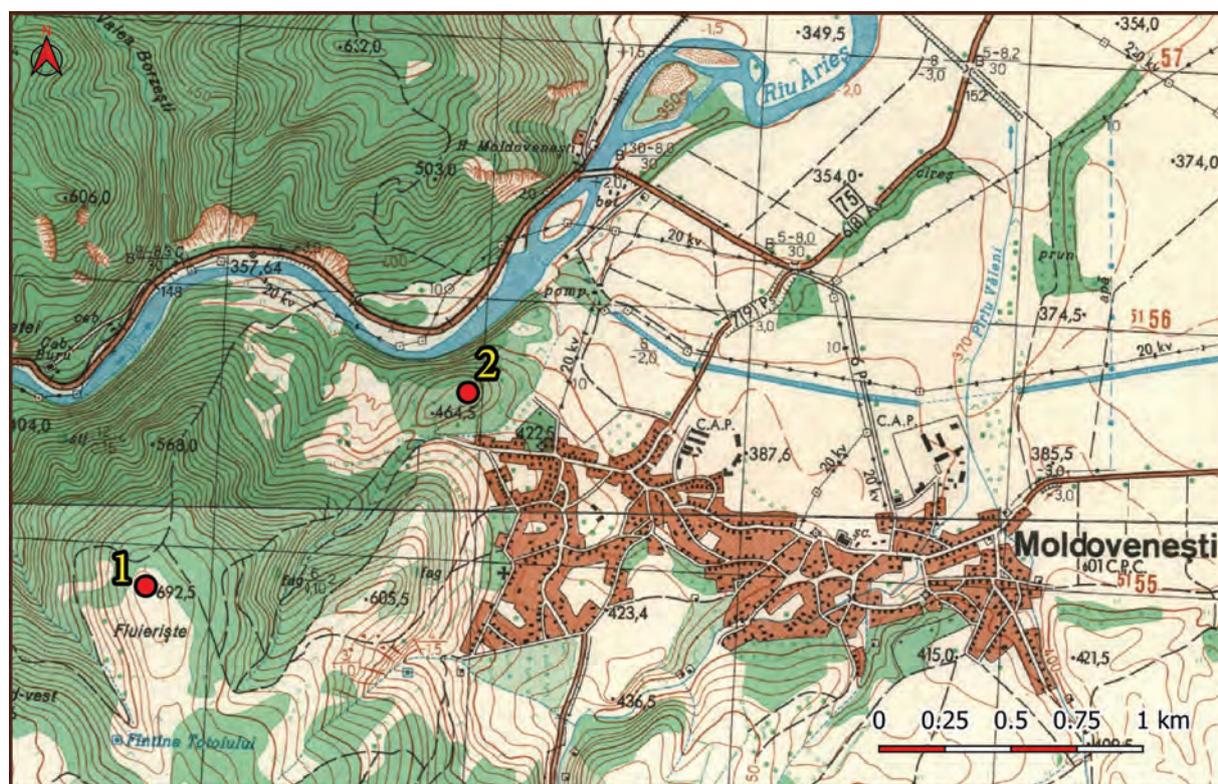


Fig. 2. Location of the Early Iron Age fortified settlement at Fluieriste – Șanțul Păgânilor (no. 1) and the medieval Turda Fortress (no. 2) on the 1:25,000-scale topographic map (*Harta topografică, scara 1:25.000*).

<sup>6</sup> Roska 1942, 299.

<sup>7</sup> RepCj, 280–285; RAN code: 58730.02; LMI code: CJ-I-s-B-07119; see also note no. 23.

<sup>8</sup> Neugebauer 1851, 197.

<sup>9</sup> Neugebauer 1851, 197, no. 15.

<sup>10</sup> Orbán 1871, 174–185.

<sup>11</sup> Orbán 1871, 174–185.

<sup>12</sup> Discă 2024, 157–162.

span overlaps with references to Turda Fortress in medieval documents<sup>13</sup>.

In addition to the defensive works and the coarse pottery, Orbán Balázs also mentioned a local legend concerning the fortification on the Fluierişte Plateau, according to which the population of Moldoveneşti and the surrounding villages resisted the Mongol invasion here<sup>14</sup>.

New data regarding this site was published toward the end of the 19<sup>th</sup> century by Téglás Gábor. In a paper from 1887, he reported several findings made in 1885 by Pálffy Károly during excavations at the place known as *Şanţul Păgânilor* (Hungarian: *Pogánysáncz*) on the Fluierişte Plateau. He mentioned the discovery of pottery fragments, spindle whorls, loom weights, and a stone grinder. Notably, Téglás observed that the pottery was made of coarse fabric with a high quartz content and was decorated with rows of parallel grooves whose combined width varied between 6 and 8 centimetres<sup>15</sup>.

At the beginning of the last century, Endre Orosz provided a more precise summary of the relevant topographic data concerning the site on the Fluierişte Plateau, emphasizing on the fact that we are dealing with a prehistoric fortification<sup>16</sup>.

The most recent field research at this site was carried out by Téglás István before the outbreak of the First World War. On that occasion, the author produced a more detailed topographic sketch of the main defensive works and reported new archaeological material (Pl. XI/2). Among the mentioned items were pottery fragments, animal bones, military equipment, and various small finds. Although in some cases the data concerning these findings is not very accurate, a couple of artifacts mentioned by Téglás István can be confidently attributed to prehistoric periods, while others – to more recent historical periods<sup>17</sup>.

Among the items that can be attributed to prehistoric periods are several bronze objects



*Fig. 3. Fluierişte – Şanţul Păgânilor Plateau on a Google Earth image (June 2022), with Rampart 1 and Ditches 1 and 4 clearly visible in the lower part of the image.*

<sup>13</sup> DIR C, vol. I, no. 1; Horedt 1958, 132–145; Horedt 1986, 111–136; RepCj, 280–285; RAN code: 58730.02; LMI code: CJ-I-s-B-07119.

<sup>14</sup> Orbán 1871, 174–185.

<sup>15</sup> Téglás 1887, 84–85.

<sup>16</sup> Orosz 1903, 93.

<sup>17</sup> Bajusz 2005a, 47–48, 409–430.

discovered by the shepherd Joachim Opra some time between 1898 and 1899. These items – initially given to the Greek-Catholic priest in Moldovenești – included arrowheads, chisels, bracelets, and axes<sup>18</sup>. Among the items that could be attributed to historical periods are an iron axe, a bronze brooch, and a silver scyphate coin with a diameter of approximately 30 mm<sup>19</sup>. The silver coin, in a rather poor state of preservation, was briefly described and schematically drawn in István Téglás's archaeological records<sup>20</sup>. According to the author, the obverse of the coin still bore a stylized depiction – represented rather schematically – of a male figure, around which traces of a beaded circle could be seen. On the reverse, a galloping horse facing right was still visible (Pl. XIII/3), rendered in a similar manner. Classified by Iudita Winkler and Ana Hopârtean as a rare specimen, the coin shares several features with coin issues of the Aiud-Cugir type. This type has been dated to the second half of the 2<sup>nd</sup> century BC and the first part of the 1<sup>st</sup> century BC, although its circulation may have extended even later<sup>21</sup>.

It may be argued that after the First World War, the site on the Fluierişte Plateau became neglected by the researchers. It is true that, before the mid-20<sup>th</sup> century, the site was briefly mentioned in *The Archaeological Repertory of Transylvania* compiled by Márton Roska, but some of the information is rather confusing, and no new data was provided<sup>22</sup>. Towards the end of the same century, the site was mentioned in the *The Archaeological Repertory of Cluj County*, and in the last few decades it has been included in the *National Archaeological Repertory* and the *List of Historical Monuments*, although in these the information is even more confusing<sup>23</sup>.

<sup>18</sup> Bajusz 2005a, 412–413.

<sup>19</sup> Bajusz 2005, 409–430, 51/184, ábra.

<sup>20</sup> Bajusz 2005, 428, 51/184, ábra.

<sup>21</sup> Winkler-Hopârtean 1973, 130, no. 1; Preda 1973, 295–300, 404; Părpăuță 2006, 104.

<sup>22</sup> Roska 1942, 299.

<sup>23</sup> RepCj, 280–285; RAN code: 58730.02; LMI code: CJ-I-s-B-07119; The location of the site proposed in both the *Archaeological Repertory of Cluj County* (RepCj) and the *National Archaeological Repertory* (RAN) is incorrect, as in reality it is located on a different, nearby hill, at about 0,5 km distance to the west from the proposed point. Near the real location of the site, on the topographic sketch of the *Cluj County Repertory*, a Scythian find (a bronze arrowhead) is marked; however, in the written description, it is associated with a hill called *Dealul Cuptorului*. The reference for this information belongs to V. Vasiliev (1980, 147), who in turn cites M. Roska (1942, 299). From a chronological point of view, the *Cluj County Repertory* tentatively dates the site to either the Neolithic period or the beginning of the Bronze Age. In

### *The Results of Field Investigations*

In order to clarify, at least in part, the situation of the site from Fluierişte – Şanţul Păgânilor, we carried out a series of field and aerial surveys in the area. The first objective of these investigations was to identify the site in question. Subsequently, the visible structures were documented through photographs and field measurements. A Digital Surface Model (DSM) was created using a DJI Phantom 4 RTK drone. Due to the terrain conditions and technical limitations, only the non-forested part of the plateau could be recorded using this method. In order to illustrate the full extent of the site, this data was correlated with other lower-resolution cartographic resources (SRTM, ASTER DEM, military topographic maps, etc.; in this regard, see Fig. 1–3, 6; Pl. I–IV; XI–XII). Finally, these results were analysed and discussed in order to highlight the characteristics of the defensive elements identified on the Fluierişte Plateau, which may play an important role in defining the chronology and type of the site.

The site in question was identified during field investigations on the eastern edge of the Trascău Mountains (Fig. 1A/1; Fig. 2–3; Pl. I–IV), on a plateau that rises west of Moldovenești, from about 400 meters – the average elevation in the village area (at the western limit of the Turda Depression) – to nearly 700 meters on the Fluierişte Plateau (at the northeastern edge of the Trascău Mountains)<sup>24</sup>.

the *National Archaeological Repertory*, this site is dated to the Early Neolithic. This proposition is based on a reference to a work by Z. Maxim (1999, 170), where she refers to the existence of a Starčevo-Criş settlement in the area (?). Maxim, in turn, cites an entry from the *Cluj County Repertory* (1992, 280), which records the discovery of pottery fragments decorated with fingernail impressions in this point. She also mentions, from the territory of Moldovenești, the discovery of remains associated with the Bodrogkeresztúr culture, citing N. Vlăsa (1976, 59), who publishes a vessel that is kept in the Cluj Museum (Vlăsa 1976, 60, Fig. 2/4). Regarding this vessel, M. Roska (1942, 299) noted that it originated from the vicinity of the *Fütöhegy* point.

<sup>24</sup> UTM geographical coordinates: 1) 46.499186 N, 23.639053 E; 2) 46.497495 N, 23.643474 E; 3) 46.493070 N, 23.641374 E; 4) 46.496679 N, 23.637975 E; Stereo 70 geographical coordinates: 1) X–556371.16; Y – 395553.81; 2) X–556177.49; Y – 395889.85; 3) X–555688.52; Y – 395720.32; 4) X–556093.98; Y – 395466.28 (the coordinates indicate the maximum extent of the site along the east–west and north–south axes, following the 670 m contour line); The correct location of the site in question is also confirmed by the *Third Austrian Military Survey (1:25,000)*, which includes many of the toponyms referred to in connection with the fortified settlement at Fluierişte: <https://maps.arcnum.com/en/map/thirdsurvey25000/?bbox=2629528.1468>



Fig. 4. Pottery fragments from the Fluieriște – Șanțul Păgânilor fortified settlement, identified during the latest investigations.

About 200 meters southwest of the plateau's edge lies *Totoiului Spring* (Romanian: *Fântâna Totoiului*; Hungarian: *Totvaj kút*), a rich water source still in use today for supplying the village of Moldovenești. Several documents dating back to the 18<sup>th</sup> century show that even then an aqueduct was bringing water from this spring to the village. According to a local tradition recorded by Orbán Balázs and István Tégylás, this aqueduct (which was not identified in the field) may have been constructed as early as the Roman period<sup>25</sup>.

Currently, the central area of the plateau is covered with grass, while the extremities (except for the southwestern part) are forested. In the past, however – as revealed both by the accounts of Balázs Orbán and Tégylás István<sup>26</sup>, and also by the digital surface models (Fig. 2–3; Pl. I–II) – the plateau was ploughed and used for agriculture. The presence of vegetation has significantly reduced the likelihood of identifying archaeological materials. During field surveys at this site, only a few pottery fragments typical of the Gáva culture were

identified (Fig. 4). These were found in the southeastern corner of the settlement, where forest roads intersect, but smaller pottery fragments of the same type were also observed along the dirt road that runs north of the main east-west rampart, as well as in the southeastern area of the plateau<sup>27</sup>.

The Fluieriște Plateau has a shape that closely resembles the number 8 when viewed from above. In the area where the plateau is narrowing, its width does not exceed 200 meters; however, it widens considerably to the north, toward the Arieș Valley, and to the south, toward the Dracului Valley. These features, along with the fact that the part of the plateau facing the Arieș River is bordered by fairly steep slopes towards the north, east, and west, allowed the construction of a large promontory-type fortification on this spot. The area in question stretches over roughly 350–400 meters in an east-west direction and about 680 meters from north to south at its maximum length (Fig. 1A/1; Fig. 2–3; Pl. I–III). Throughout history, this plateau has undergone extensive human interventions on multiple occasions. At present, the most obvious traces of these interventions are linked to the

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<sup>25</sup> Orbán 1871, 174–185; Bajusz 2005, 47–48, 409–430.

<sup>26</sup> Orbán 1871, 174–185; Bajusz 2005, 47–48, 409–430.

<sup>27</sup> No archaeological material was collected; the pottery fragments shown were photographed at the location.

extent of the plateau's levelling, as well as to the trenches, ramparts, embankments, dirt roads, and ploughing furrows still visible on the field.

Structurally, the defensive works at the Şanţul Păgânilor site likely included several fortification elements, such as ditches, earthen ramparts, and possibly wooden palisades. So far, based on field surveys and terrain models, only segments of ditches and earthen ramparts have been identified, as follows:

The *Main East-West Rampart (1)* – (Fig. 3, 6; Pl. II/2; Pl. I–III; Pl. IV/1). The entire length of the rampart in the visible section (on the digital surface model) is 174 meters, in a straight line. However, if the winding path of the rampart is followed, its total length in the visible section is 195 meters. In a straight line, the rampart continues into the forest to the east for at least another 50–60 meters.

As already mentioned, the visible segment of the structure follows a winding path, forming seven loops on a horizontal plane. Of these, with radii of up to 18 meters, three are oriented outward from the fortified enclosure (to the south), and four inward (to the north). In the central area of the second inward-facing loop, there is a break in the rampart that is approximately 7 meters wide at the top and around 2 meters wide at the base (Pl. IV/8; Fig. 6). The cross-section of the rampart is convex, with a base width of up to 15–17 meters, and a maximum preserved height of about 2.5–3 meters (Fig. 5–6; Pl. VI; Pl. XI/Section 1; Pl. XII/Sections 3 and 5).

The rampart can be divided into several conventional segments, based on evident interruptions along its course (Pl. IV; Fig. 6):

- The eastern section, which disappears into the forest and is separated from the central segment by the road marked as no. 7.

- The central section, where the winding path of the rampart is most clearly visible. This is also where the break in the rampart, marked as no. 8 on Pl. IV, is located.

- The western end of the rampart is separated from its central section by the modern road marked as no. 6 (Pl. IV/6); this “tail” of the rampart is visible on the western slope (clearly seen on the orthophoto maps – Fig. 3; Pl. II and the shaded relief model – Fig. 6).

- While the central and eastern parts of the rampart are preserved at a maximum height of up to 3 meters (see Pl. XI/Section 1 and Pl. XII/Section 3), the western “tail”, located on a slope, has a much lower preserved height (around 1 meter – see

Pl. XII/Section 5). The inclusion of this western segment as part of the *Main East-West Rampart (1)* may be suggested by its organic alignment with the rest of the structure, as well as by another aspect that will be addressed below.

The internal stone-and-earth structure of the rampart can be observed in the area where it is intersected by *Road no. 6* (Fig. 5; Pl. IV/6; Pl. VIII/1; Pl. IX).

The *Main East-West Ditch (1)* (Fig. 3; Fig. 5–6; Pl. I–III; Pl. IV/1). This ditch is located in the area where the width of the Fluierişte Plateau narrows to a minimum, to the south of the previously described rampart, which it mirrors. Initially, we assumed that the ditch associated with the *Rampart no. 1* was represented by the structure marked as no. 4 on Pl. IV. However, we concluded that this structure is a modern intervention that has disturbed most of the ancient ditch. Arguments supporting the interpretation of *Ditch no. 4* as a modern feature are as follows:

- the absence of topsoil and vegetation at several points along its course (Fig. 3; Pl. II; Pl. VIII/1; Pl. X);

- its great depth (up to 4.5 meters) and V-shaped section (Pl. XI/Section 1), which shows no obvious signs of long-term deposition of sediments;

- its orientation, as it diverges south-eastward away from *Rampart (1)*;

- the fact that no ditch is represented on the historical sketches of Balázs Orbán or Téglás István, something that would be expected given the current dimensions of structure no. 4 (approx. 150 meters in length, max. 4.5 meters in depth, and an opening at the top of up to 9.5 meters).

Furthermore, on I. Téglás's plan (Pl. XIII/2), *Road no. 7*, which cuts through the rampart, seems to be marked out, along with the break at no. 8. Comparing this situation with the present one, as revealed by the surface model (Pl. I), it can be observed that this road – which existed in the 19<sup>th</sup> century – is now cut by *Ditch no. 4*, which means that the ditch represents a relatively recent intervention.

The fact that *Road no. 7* crossed this area in the 19<sup>th</sup> century may be significant from another perspective. Namely, if an ancient ditch existed here, it could not have been very deep, since the vehicles of the time were able to cross it. On the surface model, in the areas corresponding to the ends of *Rampart no. 1* (the western end on the slope and the eastern end near the forest – Pl. XI/Section 2; Pl. XII/Sections 3 and 5), a superficial ditch can be observed, with a concave cross-section, an opening

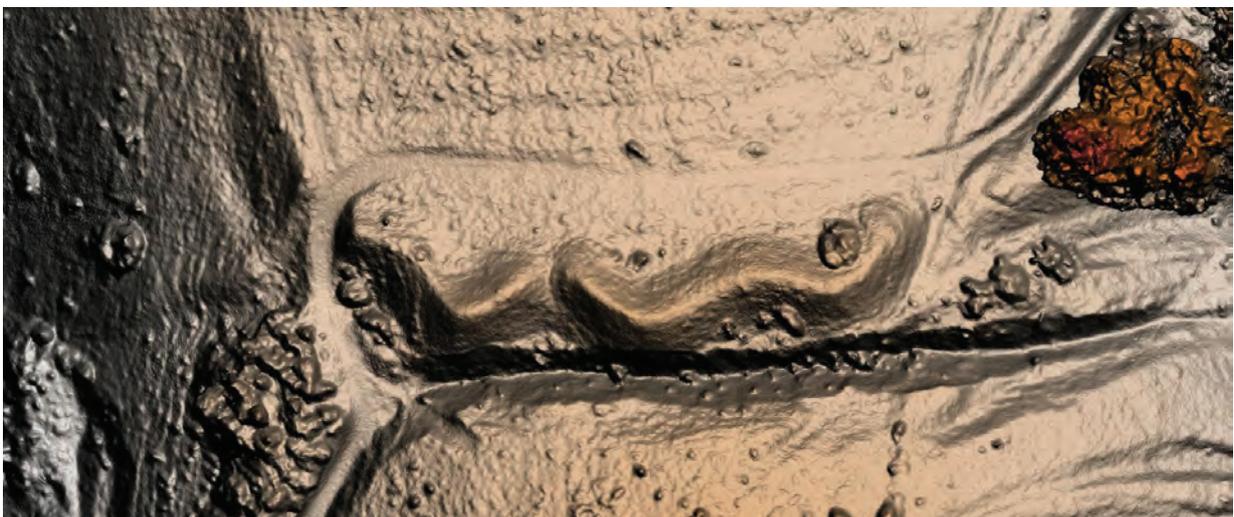


*Fig. 5. The western part of the Main East-West Rampart (1), viewed from the south.*

at the top of 3–4 meters, and a maximum preserved depth of 1 meter (most obvious in Pl. XII/ Section 3). This must be the ancient ditch associated with *Rampart no. 1*, as it mirrors its path at both ends. Additionally, the section of this ditch is smooth, likely indicating considerable deposition of sediments over time. Thus, it can be concluded that *Ditch no. 4* is modern, as it overlaps a big segment of the ancient *Ditch no. 1*. This modern intervention was probably related to the water supply system for the village of Moldovenești, sourced from the Totoiului Spring located southwest of

the fortified plateau. The installation was probably built in the second half of the 20<sup>th</sup> century<sup>28</sup>. It is likely that, in order to ease the installation of the water supply pipe, the course of the old ditch was followed for the most part.

Therefore, the main ancient defensive structure that barred access to this promontory is the undulating *Rampart no. 1* – an imposing construction, as evidenced by its preserved height and winding path, which exposes the flanks of any potential attacker. Outside this rampart, a parallel defensive



*Fig. 6. In the center: the Main East-West Rampart (1) and Ditches nos. 1 and 4, shown on a Digital Surface Model (DSM).*

<sup>28</sup> Dîscă 2024, 48.

ditch existed at some point, of which only a small portion remains preserved today.

As evidenced by geological studies and confirmed through field observations, the construction of the ditches must have been quite a difficult task, as they were dug into a massif of limestones and basalts<sup>29</sup> (Pl. VIII/1; Pl. X). It is likely that these materials, along with others, were used in the construction of the rampart.

One additional point is worth discussing here, namely if any of the three existing interruptions in the *Rampart no. 1* could represent an ancient gate. We have already established that *Road no. 7* crossed the ancient ditch and cut through the rampart as early as the 19<sup>th</sup> century, so it is possible that this interruption is the result of a modern intervention related to the construction of *Road no. 7* (Pl. IV/7). The situation appears similar on the opposite side, where *Road no. 6* crosses another loop of the rampart (Pl. IV/6). This road is not marked on any historical sketch, which may indicate that it dates after the 19<sup>th</sup> century and that the interruption in the rampart was caused by its construction. In both historical sketches, the rampart is represented as continuous in this western segment. The only remaining interruption is at no. 8, which is not connected to any modern road. It appears on Téglás's sketch, and seems, in all likelihood, to indicate the position of an ancient gate which provided access to the fortified enclosure (P. IV/8). It is unlikely that another ancient gate was reused by modern *Road no. 7*, due to the relatively short distance between the two points, which would not justify such a configuration of defensive elements that would further expose the area (Fig. 6; Pl. I–IV).

Other defensive elements have been identified on the western side of the plateau. These consist of a rampart and a ditch located at its base to the west, marked on the plan as no. 2 and referred to as the *Secondary North–South Ditch and Rampart (2)* (Pl. IV/2; Pl. V).

The *Secondary North–South Rampart (2)* (Pl. I–III; Pl. IV/2). Unlike *Rampart no. 1*, this one is much less visible in the field and on the digital surface models (Fig. 3, 6; Pl. I–II, V). It also differs in shape, being rectilinear in plan, with a traceable length of approximately 150 meters. In the cross-sections taken from the digital model (Pl. XII/Sections 4 and 8), it appears as a subtle edge of the plateau, rising about 0.4 meters

above the surrounding surface, with a base width of approximately 4–5 meters. The rampart has undoubtedly undergone degradation over time, with portions of it having slipped down the slope. These same processes likely contributed to the current poor visibility of the ditch at its base.

The *Secondary North–South Ditch (2)* (Pl. I–III; Pl. IV/2, V). It does not have a concave cross-section, as might be expected, but instead appears as a horizontal platform along the western slope (Pl. XII/Section 4). It is particularly visible in the non-smoothed slope-shader terrain model (Pl. XI) and in the detail of *Rampart 1* (Fig. 6). As such, few details can be provided about this ditch, apart from a visible length of approximately 113 meters, a platform width of around 6 meters, and an elevation difference of about 4 meters from the top of the rampart. The two elements are evidently complementary, as suggested by their alignment. Their extension to the north remains unclear, as the forest cover has prevented thorough documentation in that area. However, the ditch appears to be shorter than *Rampart no. 2*, the latter becoming increasingly faint after a possible intersection with the *Secondary East–West Rampart (3)* (Pl. XII/Section 8).

An interesting detail is worth adding regarding *Ditch no. 2*. As seen in the same digital terrain models (Fig. 6; Pl. I, Pl. XI), as well as in section no. 6 (Pl. XII), which follows the slope of the western “tail” of *Rampart no. 1*, *Ditch no. 2* appears to overlap *Rampart no. 1* at the point where they intersect. This detail may indicate a chronological sequence between the two defensive elements, with the structures marked as no. 2 being dated later than those marked as no. 1.

*Rampart no. 2* is also illustrated on the topographic sketch drawn by Téglás István, who represented it as a continuation of the *Rampart no. 1* toward the north (Pl. XIII/2)<sup>30</sup>. However, we consider that the identification of the western “tail” of *Rampart 1* on the slope – which does not appear on Téglás's sketch and extends beyond the area enclosed by the *Rampart and Ditch 2* –, together with the observation regarding the overlap of the two elements, provide strong arguments for distinguishing the two structures both spatially and chronologically.

Similar fortification works are mentioned by Orbán Balázs on the eastern side, where the Fluierişte Plateau is bordered by a much gentler

<sup>29</sup> Petrescu-Trandaş 1966; Lupu *et alii.* 1968, 16–17, 26–27.

<sup>30</sup> Bajusz 2005, 419, 28/43–44, ábra.

slope<sup>31</sup>. Due to dense vegetation and possibly their poor state of preservation, these features were not detected using the techniques and methods applied in the present research. We hope that future use of LiDAR-type surveying techniques will bring these structures to light, along with a clearer delineation of the entire fortification.

The *Secondary East–West Rampart (3)* (Pl. I–IV; Pl. VII). This rampart runs parallel to *Rampart no. 1* and is located approximately 130 meters north of it (Pl. IV/3). *Rampart no. 3* is relatively straight, with a slight shift in orientation toward the northeast, near its eastern end, similarly to the main *Rampart no. 1*. Its traceable length is about 150 meters, fading out toward the east. Its connection to *Rampart no. 2* in the west is also unclear, as *Rampart no. 3* is heavily degraded in that area. Generally, *Rampart no. 3* has been significantly affected by repeated ploughing and erosion. As a result, its preserved dimensions have been clearly altered: a maximum height of 2 meters is detectable on the southern slope (Pl. XII/Section 7), while its base width is of approximately 6 meters. It is also likely that the trajectory of the rampart has been disturbed by the same degrading factors: its path appears slightly winding in some areas, and it is unclear whether this is because of its degradation or because this rampart mimics, to a degree, the shape of *Rampart no. 1*. It is also unknown whether a ditch accompanied this rampart on its southern side. A small depression running parallel to the rampart, to the south, appears identical to the plough furrows visible in the east–west direction across the entire surface of the plateau (Fig. 3; Pl. I, Pl. XI).

It is difficult to determine, at this stage of the research, the exact relationship between these defensive elements. While *Rampart no. 1* may indicate a first large-scale fortification effort (and a primary enclosure), *Rampart no. 3* could suggest either an internal subdivision of the primary enclosure – which is supported by the fact that the two structures are parallel and quite similar, to a certain point, in layout – or a reduction of the fortified area in a later phase.

But where should *Rampart and Ditch no. 2* on the western side be placed, as they appear to overlap or complement the initial fortification elements? The simplest explanation would be that they represent an extension of the initial fortifications, intended to provide additional reinforcement to the more exposed western side of the plateau. Based on these apparent relationships, it

can be assumed that we are dealing with at least two, if not three, construction phases of the fortified settlement, although establishing their precise chronological sequence remains problematic. What is certain is that the relationship between these structures is complex and may suggest either a prolonged occupation of the plateau or a possible reoccupation, or perhaps even both.

In addition to the ancient fortification works discussed above, several more recent interventions were observed during the field research in the central-northern area of the Fluierişte Plateau (Pl. I–IV; Pl. VIII/2). These interventions, consisting of a series of military trenches, are likely related to the fighting that took place along the Arieş Valley during the Second World War, after the 23<sup>rd</sup> of August of 1944<sup>32</sup>. The trench line extends from north-northwest to southeast for about 170 meters, curving toward the southwest, suggesting that these engineering works were most likely carried out by Hungarian-German troops. Their depth reaches up to 0.65 meters below the current ground level, and the width at the top extends up to 3.4 meters. The cross-sectional profile is concave. The excavated soil was deposited along the western side (Pl. I; Pl. VIII/2). Other possible military engineering works were identified southwest of the fortified enclosure, near the Fântâna Totoiului. These elements also highlight the excellent strategic position of this plateau.

At the current stage of research, the exact area of the fortified enclosure at Şanţul Păgânilor cannot be determined, as its boundaries have not been precisely defined on all sides. The only clearly identifiable boundaries are those on the south and west, although even in these cases the full trajectory of the structures could not be documented. Based on these limits, we estimated the total area of the primary enclosure (bounded to the south by *Rampart and Ditch no. 1*) by following the relevant contour lines. Thus, if we follow the 680-meter contour line, the area of the primary enclosure reaches approximately 18 hectares. If we follow the 670-meter contour line, as also suggested in Pl. III, the area comes to about 22 hectares. Therefore, at this stage of research, the estimated area of the primary enclosure would be around 20 hectares.

#### *The chronology and importance of the site*

The findings reported in the literature from the area of the site in question suggest that the Fluierişte Plateau was occupied (possibly only for

<sup>31</sup> Orbán 1871, 179.

<sup>32</sup> Cupşa 1979, 15; Faur-Giuran 1981, 302.

short time spans) during several different periods, although the degree of occupation for each of these phases is currently difficult to determine. Among the reported findings, items characteristic of prehistoric periods stand out. Particularly noteworthy in the context of dating the fortification elements is Endre Orosz's assertion that the structure in question is a prehistoric fortification.

Most of the previously reported finds appear to be characteristic of the Late Bronze Age or Early Hallstatt period, whether they consist of military equipment, various bronze objects, or pottery<sup>33</sup>. The latter is repeatedly described as being fired in a reducing atmosphere, containing a high amount of quartz, and being decorated with successive rows of grooves<sup>34</sup>. These characteristics were also confirmed by the few pottery fragments identified during our field surveys. Based on their shapes, decoration, and fabric, these fragments can be attributed to the Gáva-Holigrady cultural complex (Fig. 5). This cultural complex, which spans a very large area encompassing parts of present-day Slovakia, Hungary, Romania, the Republic of Moldova, and Ukraine, is generally dated from Hallstatt A to the beginning of Hallstatt C (late 12<sup>th</sup> century – early 8<sup>th</sup> century BC)<sup>35</sup>. In the vicinity of Moldovenești, artifacts attributed to the Gáva culture have also been reported at Cheia, Cornești, and Dumbrava<sup>36</sup>.

The initial fortification of the plateau, marked by the *Rampart and Ditch no. 1*, can also be associated with this cultural complex and chronological framework. One of the commonly observed features of fortified settlements within the Carpathian Basin during this period is their localization on dominant positions, such as large plateaus. Because such settlements required vaster areas, bigger plateaus were considered more suitable for the construction of enclosed, promontory-type fortifications. Among the best-known sites of this type are those from Cernat, Șeica Mică, Someșul Rece, and Voivodeni<sup>37</sup>. These dominant locations were preferred both for the defensive advantages they offered, and for the opportunity they provided to monitor and control key routes along major watercourses<sup>38</sup>.

<sup>33</sup> Bajusz 2005a, 412–413.

<sup>34</sup> Neigebauer 1851, 197; Orbán 1871, 174–185; Téglás 1887, 84–85; Bajusz 2005, 409–430.

<sup>35</sup> Ciugudean 2012, 229–243, Fig. 14; Bălan 2013, 267–312.

<sup>36</sup> Horedt 1974, 223; RAN code: 8194.02; Discă 2021, 177, Pl. 5/7–8.

<sup>37</sup> Becker 2022, nos. 040, 152, 167, 204.

<sup>38</sup> For preferred locations of Early Iron Age fortified settlements, see Bălan 2013, 267–312; Becker 2022, 243–284.

As in the case of Moldovenești, these fortified settlements were typically delineated by defensive ditches and ramparts, enclosing areas ranging from less than one hectare to several dozen hectares<sup>39</sup>. Fortified settlements covering dozens of hectares are not uncommon for the period and region in question, despite the fact that they are not too numerous. Among the best-known settlements with fortified enclosures of over 10 hectares are the sites from Ciceu-Corabia, Someșul Rece and Teleac<sup>40</sup>.

Additionally, the construction technique of the main rampart at Moldovenești shows close parallels with sites from the same region and time-frame. Ramparts which follow a winding path are also known at Huedin – *Bolic* (Cluj County)<sup>41</sup> and Rodeș – *Dealul Cetății* (Brașov County)<sup>42</sup>, while the rampart at the Voivodeni – *Bunghart* fortification in Mureș County<sup>43</sup> bears a striking resemblance to the one at Moldovenești. Similarly, ramparts over 10 meters wide, built from earth and stone, are commonly found among fortified settlements from this period. Notable examples include the sites at Șona and Huedin<sup>44</sup>. The height of the main rampart at Moldovenești, reaching up to 3 meters, is also not unusual. Fortifications with ramparts exceeding 2.5 meters in height can be found at Sighetu Marmăției, Sărățel, and Satu Mare. The tallest known rampart to date belongs to the Ciceu-Corabia fortification, reaching up to 4.5 meters<sup>45</sup>. One final common feature between the site at Fluieriște and other fortified settlements that is worth mentioning is the shape of the possible gate identified as no. 8 (Fig. 5; Pl. I; Pl. IV/8.). A similar structure is found at Huedin, the latter being classified by F. Becker as type 3 of the frontal gates<sup>46</sup>. According to A. Zanoci's typology, this gate would belong to type I.b.2 – frontal gates oriented inward (*Zangentore*), like those at Subcetate or Teleac<sup>47</sup>.

Based on the highlighted features, the nature of the main defensive elements (*rampart and ditch no. 1*), as well as the grooved pottery observed on the surface or mentioned in the literature, we can classify the site at Fluieriște – Șanțul Păgânilor as one

<sup>39</sup> Horedt 1960, 179–187; Becker 2022, 259, Abb. 11.

<sup>40</sup> Becker 2022, nos. 047, 167, 177, 181.

<sup>41</sup> Becker 2022, no. 083.

<sup>42</sup> Becker 2022, no. 136.

<sup>43</sup> Becker 2022, no. 204; RAN code: 120325.02.

<sup>44</sup> Bălan 2013, 283–284.

<sup>45</sup> Bălan 2013, 283–284.

<sup>46</sup> Becker 2022, Tab. 1, Abb. 18.

<sup>47</sup> Zanoci 2015, 12–16.

of the large, fortified settlements of the blocked promontory type, typical for the Early Hallstatt period. The area of approximately 20 hectares of the primary enclosure places it among the largest such fortified settlements known in Transylvania<sup>48</sup>.

It cannot be stated with certainty that the site was occupied prior to this period. A possible occupation dating to earlier periods, as suggested in *The Archaeological Repertory of Cluj County* or other publications (see note 23 above), has not yet been confirmed by solid evidence, although it cannot be ruled out. On the other hand, it is certain that the settlement was (re)occupied after the phase marked by the *Rampart and ditch no. 1*. At some point, the fortification appears to have been reinforced by the *Rampart and ditch no. 2*, either during the Early Iron Age or at a later period. The same applies to the *Rampart no. 3*, which could represent either an internal subdivision of the Early Iron Age fortified settlement or a later reduction in the fortified area. According to the second hypothesis, a reoccupation of the fortification – on a smaller scale – during the Late Iron Age might be expected, as has already been observed for other Hallstatt-period fortified settlements<sup>49</sup>. The above-mentioned Dacian coin discovered in the area could indicate such a possibility, although it remains the only firmly datable Dacian find to date. Regarding the end of the Hallstatt-period fortified settlement, a possible clue may be provided by the aforementioned Scythian arrowhead, found nearby. In connection with the Scythian presence in the area, we should also mention the 1898 discovery of a bronze comb between Moldovenești and Răchiș (now incorporated into Moldovenești), which has since been lost. The comb featured a central column flanked by a horse on each side<sup>50</sup>, a remarkable piece classified among the uncertain Scythian finds from Transylvania by V. Vasiliev, by analogy with the well-known golden comb from Solokha (Ukraine)<sup>51</sup>. Its Scythian character seems, nevertheless, to be most probable, V. Vasiliev's uncertainty probably residing in the fact that he couldn't directly analyze it, as it had been lost.

As mentioned above, the findings from the Fluieriște – Șanțul Păgânilor suggest that the site was occupied during several periods, although most of the material seems to be characteristic of the Early Hallstatt period<sup>52</sup>. The hypothesis that

emerges from both the academic literature and the field investigations conducted for this study is that, during the Early Hallstatt period, a large, fortified settlement existed at Moldovenești and may have functioned as an important centre of power.

Among the arguments that can be brought in support of this hypothesis are:

1. the features and dimensions of the primary fortified enclosure identified at Fluieriște – Șanțul Păgânilor;
2. the fact that the fortified settlement appears to have been a permanent one, rather than a simple refuge fortification;
3. the numerous bronze hoards and isolated bronze items discovered in the area (see below);
4. the environmental conditions, especially the general topographical layout and the presence of natural resources of primary importance.

With regard to environmental conditions, it is worth noting that the Fluieriște Plateau allowed the construction of a large fortification through a reasonable effort. The site also benefited from the proximity of the powerful springs in the Fântâna Totoiului area, located just 200 meters from the southwestern corner of the settlement. At the same time, the dominant position of the plateau – on a hill spur projecting toward Moldovenești and the Arieș River – allowed easy control of the access to the Arieș Valley. This essentially meant control over one of the most important communication routes in the region, as well as over the connections between the Golden Quadrilateral of the Apuseni Mountains – rich, among other things, in iron, copper, gold, and silver – and the Transylvanian Plateau<sup>53</sup>.

As already pointed out, the topography, overall layout, and construction techniques of the ramparts share numerous features with the fortified settlements of the Gáva culture. Considering the scale of the fortification works and the area of the fortified enclosure, this appears to be one of the largest sites of its kind known so far within the Carpathian Basin.

#### *Finds and settlements contemporary with the site in the surrounding area*

In the following lines, we will present several other discoveries from the Moldovenești area that may be connected in some way to the fortified settlement from the Early Hallstatt period.

Approximately 5.5 km northeast of the

<sup>48</sup> Becker 2022, 259.

<sup>49</sup> Glodariu 1983, 63.

<sup>50</sup> Roska 1942, 28, no. 113.

<sup>51</sup> Vasiliev 1980, 152.

<sup>52</sup> Ciugudean 2012, 229–243; Ciugudean 2021, 55–96.

<sup>53</sup> Borcoș *et alii*. 1983, Fig. 16, 17; Borcoș *et alii*. 1984, 109–113.

Fluierişte – Şanţul Păgânilor site, on the left bank of the Arieş River, within the territory of the village of Corneşti (Mihai Viteazu commune, Cluj County), lies another fortification, located at the point known as *Cetatea Babei* (Hungarian: *Bábvára*; possibly identical with *Cetatea Fetei*). This site was broadly dated by I. Ferenczi to the Metal Ages, but it most likely belongs to the Early Iron Age<sup>54</sup>. It is possible that the two fortifications complemented each other at some point in controlling the Arieş Valley as it exits the mountainous area. The Corneşti site is situated directly above the confluence of the Hăşdate Valley and the Arieş River, and it offers direct visibility toward the settlement at Moldoveneşti (Fig. 1A/3).

As for the bronze hoards discovered in this area, it is noteworthy that within a 10 km radius, no fewer than six such hoards have been identified, dating to the Late Bronze Age and the Early Hallstatt period. Due to incomplete data regarding their discovery context and assemblage, two of these hoards could not be precisely assigned to a specific chronological phase and have been broadly placed within the aforementioned chronological framework. These are the hoard from Pietroasa, discovered in the *Peştera cu Stalactitel Gaura Ceaghizului*, consisting of several sickles and various other bronze objects, possibly including a spearhead<sup>55</sup>, and the hoard from Stejeriş, discovered at an unknown location, comprising two celts, a sickle, and two bracelets<sup>56</sup>. No fewer than three of the hoards are dated to Hallstatt B1. These include the hoard discovered at Bădeni, at the *Apa Sărată* point, consisting of three celts, a sickle, a spearhead, and two *phaleræ*<sup>57</sup>; the large hoard from Corneşti, which comprises dozens of weapons, tools, accoutrements, adornments, and various other objects<sup>58</sup>; and the hoard from Plăieşti,

composed of five celts and two sickles<sup>59</sup>. Another bronze hoard, found at Buru on the bank of the Arieş River, consisted of a small cauldron with two twisted handles, two cups, and several celts, and has been dated to the Hallstatt B2 phase<sup>60</sup>.

These six hoards are complemented by isolated bronze finds originating both from Moldoveneşti itself and from several neighbouring settlements, including Bădeni, Cheia, Corneşti, Mihai Viteazu, and Turda<sup>61</sup>.

The discovery of many hoards and objects in the area around the fortified settlement of Moldoveneşti, some of them probably contemporary with the main occupation phase of the settlement, could be an indicator for the central position that this settlement played in a larger socio-economic network.

## ABBREVIATIONS

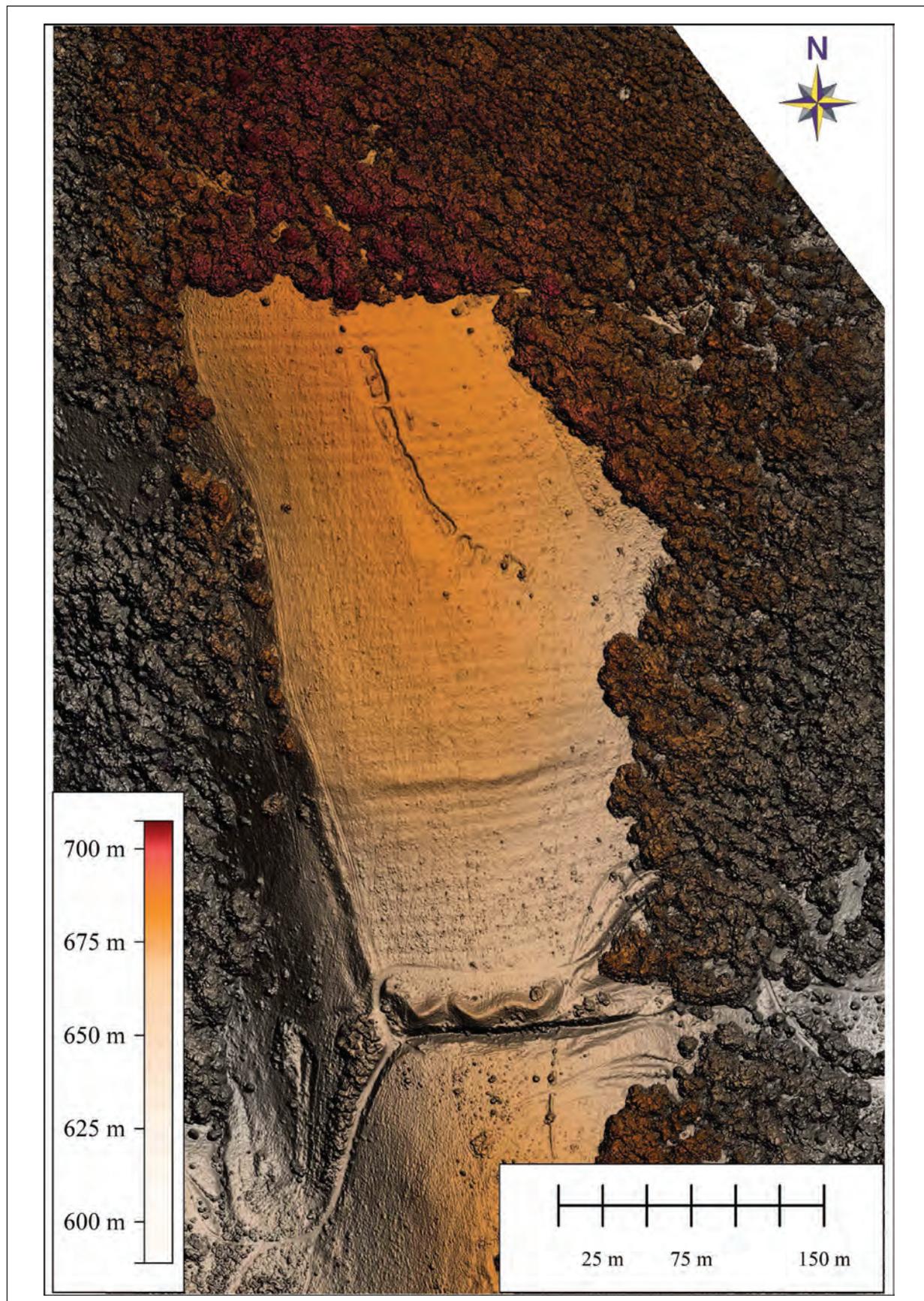
- ActaMB – Brvkenthal Acta Mvsei, Sibiu.  
 AMN – Acta Musei Napocensis, Cluj-Napoca (Cluj).  
 ArchÉrt – Archaeologiai Értesítő, Budapest  
 Crisia – Revista Crisia, Oradea.  
 ErdMúz – Erdélyi múzeum. Az Erdélyi Múzeum-Egyesület Bölcsészeti, Kolozsvár.  
 OTTÉ – Orvos-Természettudományi Értesítő, Kolozsvár.  
 ProbMuz – Probleme de Muzeografie, Cluj.  
 RB – Revista Bistriţei, Bistriţa.  
 Tyragetia – Revista Tyragetia, Chişinău.  
 Ziridava – Ziridava Studia Archaeologica, Arad.

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- <sup>55</sup> Petrescu-Dîmboviţa 1977, 157.
- <sup>56</sup> Petrescu-Dîmboviţa 1977, 151.
- <sup>57</sup> Petrescu-Dîmboviţa 1977, 126.
- <sup>58</sup> This hoard, consisting of an impressive number of items, is sometimes referred to in the literature as having been found within the territory of Corneşti village, Mureş County (Petrescu-Dîmboviţa 1977, 128–129; RepMs, 39; RAN code: 115101.02). However, the earliest published papers regarding these finds clearly state that the items originate from the territory of Corneşti village (Hungarian: *Sinfalva*), Cluj County (Orosz 1906, 374–375; Roska 1942, 248–249, no. 59; Bajusz 2005, 305–309). In recent years, several authors have pointed out this confusion (RepCj, 164; Kacsó 2010, 29–32; Berecki *et alii*. 2017, 58, 115; Dietrich 2021, 56, no. 27).
- <sup>59</sup> Petrescu-Dîmboviţa 1977, 132–133. Although it has been suggested that two of the five celts may have originated from a different hoard, the fact that all items were discovered in 1956 and are dated to the same period strongly indicates that they belong to a single hoard.
- <sup>60</sup> Petrescu-Dîmboviţa 1977, 141.
- <sup>61</sup> RepCj, 47–48, 94–95, 164–166, 275–276, 280–285, 403–404; Bajusz 2005, 47–79, 83–84, 229–235, 305–308, 409–430.

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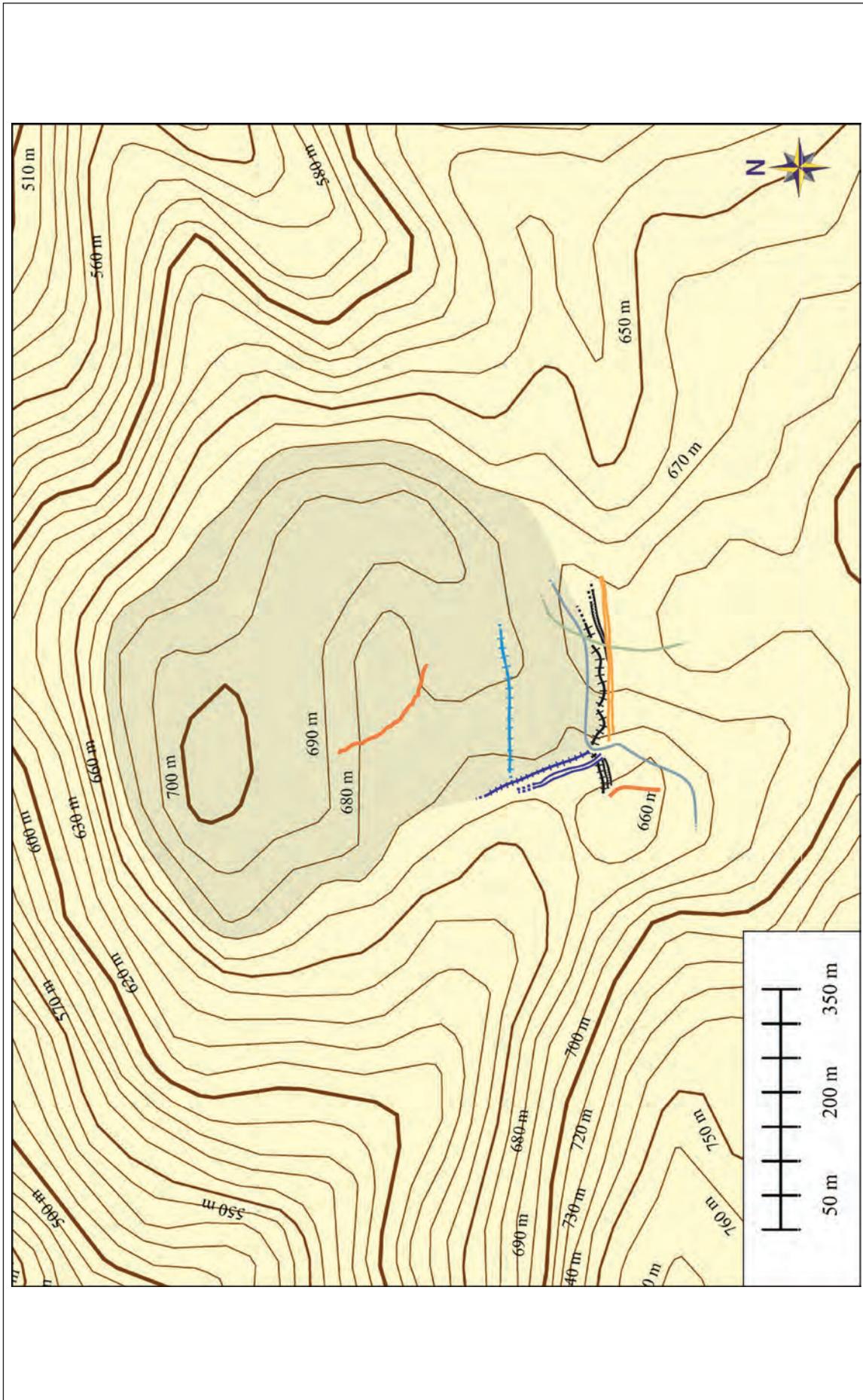
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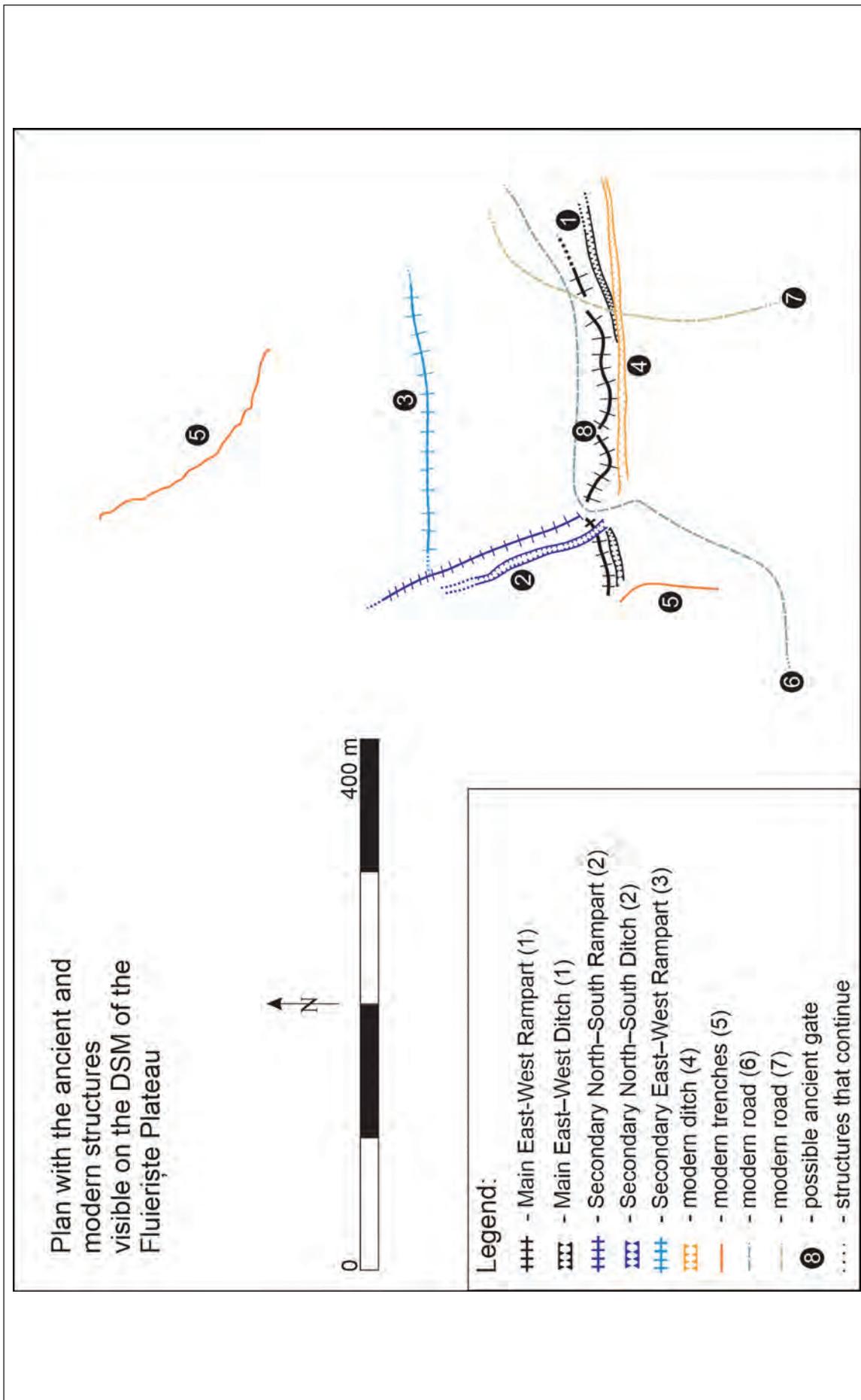
Pl. I. The Fluierişte – Şanţul Păgânilor Plateau: Digital Surface Model (DSM).



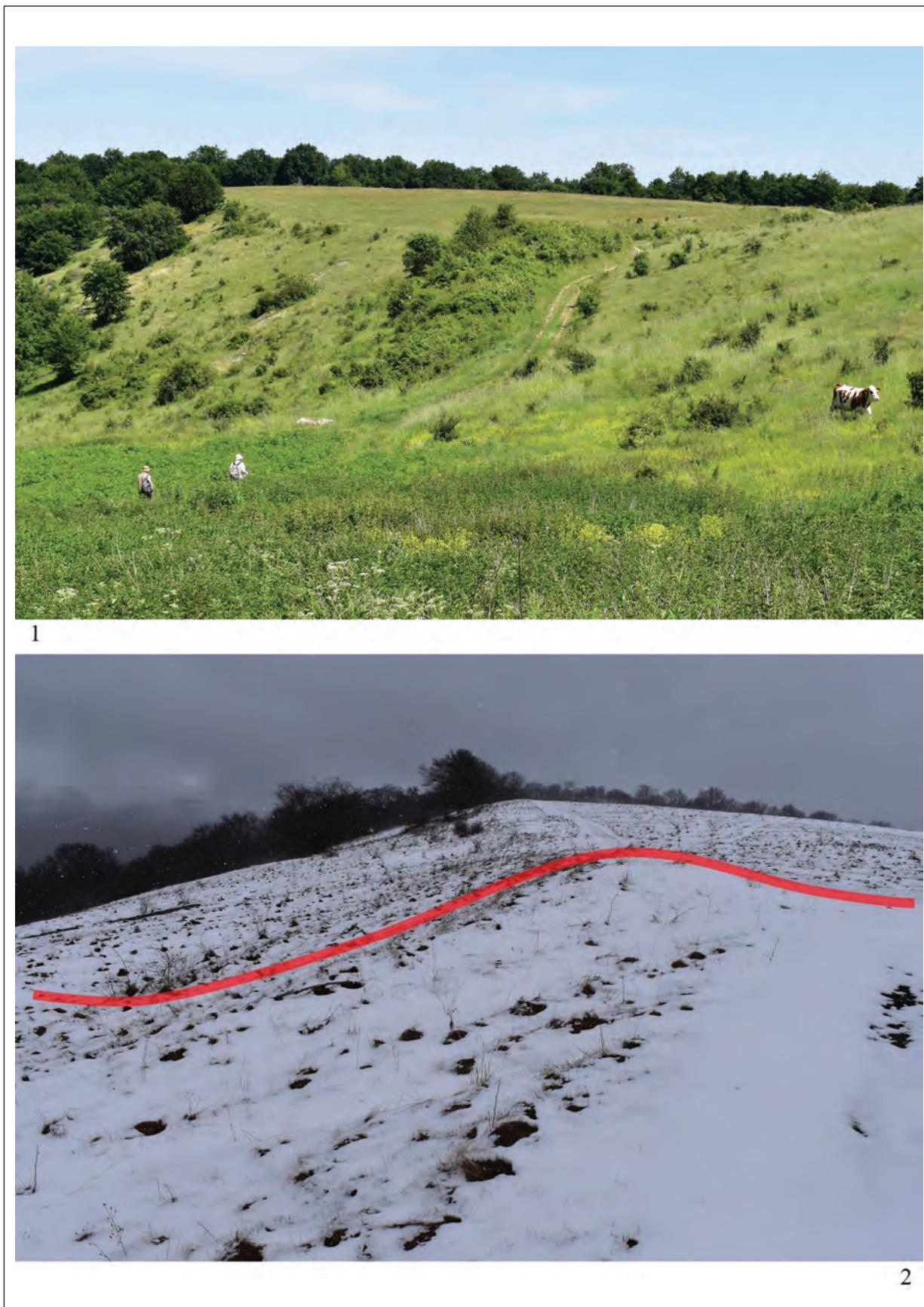
Pl. II. Orthophotoplan of the Fluierişte – Şanţul Păgânilor Plateau.



Pl. III. Topographic contour map of the Fluieriște – Șanțul Păgânilor Plateau, extracted from the ASTER DEM. Various features identified at this stage are marked with line segments. A possible area of the settlement is highlighted with a darker shade, following the 670-meter contour line.



Pl. IV. The Fluierişte – Şanţul Păgănilor fortified settlement. Detailed plan showing the various features identified on the field.



Pl. V. 1 – The western side of the fortified settlement at Fluierişte – Şanţul Păgânilor, seen from the southwest, near Fântâna Totoiului; 2 – Highlighted in red: outlines of the North-South *Rampart no. 2* and the North-South *Ditch no. 2*, seen from the southwestern corner of the fortified settlement.



1



2

Pl. VI. 1 – The western part of the East-West *Rampart no. 1*, seen from the south; 2 – The eastern part of East-West *Rampart no. 1* and the East-West *Rampart no. 3*, seen from the south.



1



2

Pl. VII. 1 – The East-West *Rampart no. 3*, seen from the south, from the area of the East-West *Rampart no. 1*; 2 – Highlighted in red: outline of East-West *Rampart no. 3*, seen from the west.



1



2

Pl. VIII. 1 – Geology of East-West *Ditch no. 4*; 2 – Highlighted in red: path of Military *Trench no. 5* in the central-northern part of the Fluierişte Plateau, viewed from its southern edge.



Pl. IX. 1 – The western edge of the East–West *Rampart no. 1*, seen from the southwest, from the road that cuts through the rampart; 2 – Internal structure of the East–West *Rampart no. 1*, visible on its western side where it is intersected by the dirt road coming from the direction of Fântâna Totoiului.

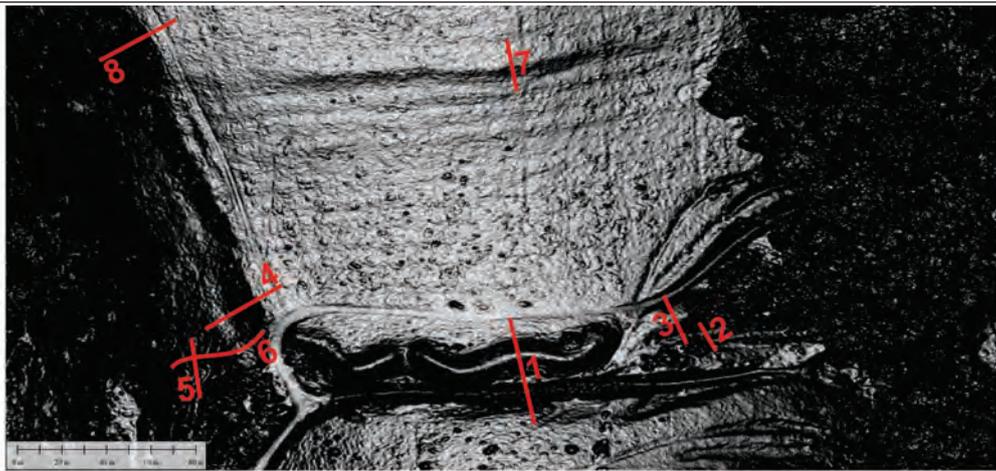


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Pl. X. 1 – The East-West *Ditch no. 4*, seen from the west, from its southern edge; 2 – The East–West *Ditch no. 4*, seen from the east, near the East–West *Rampart no. 1*.

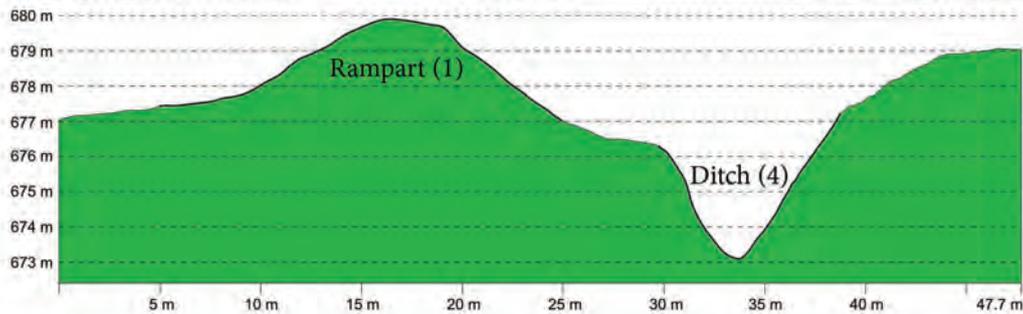


DSM (smooth slope shader) with section positioning

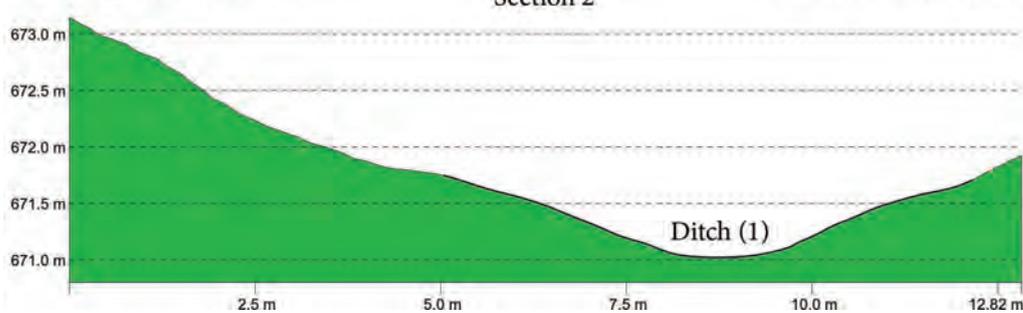


DSM (non-smooth slope shader)

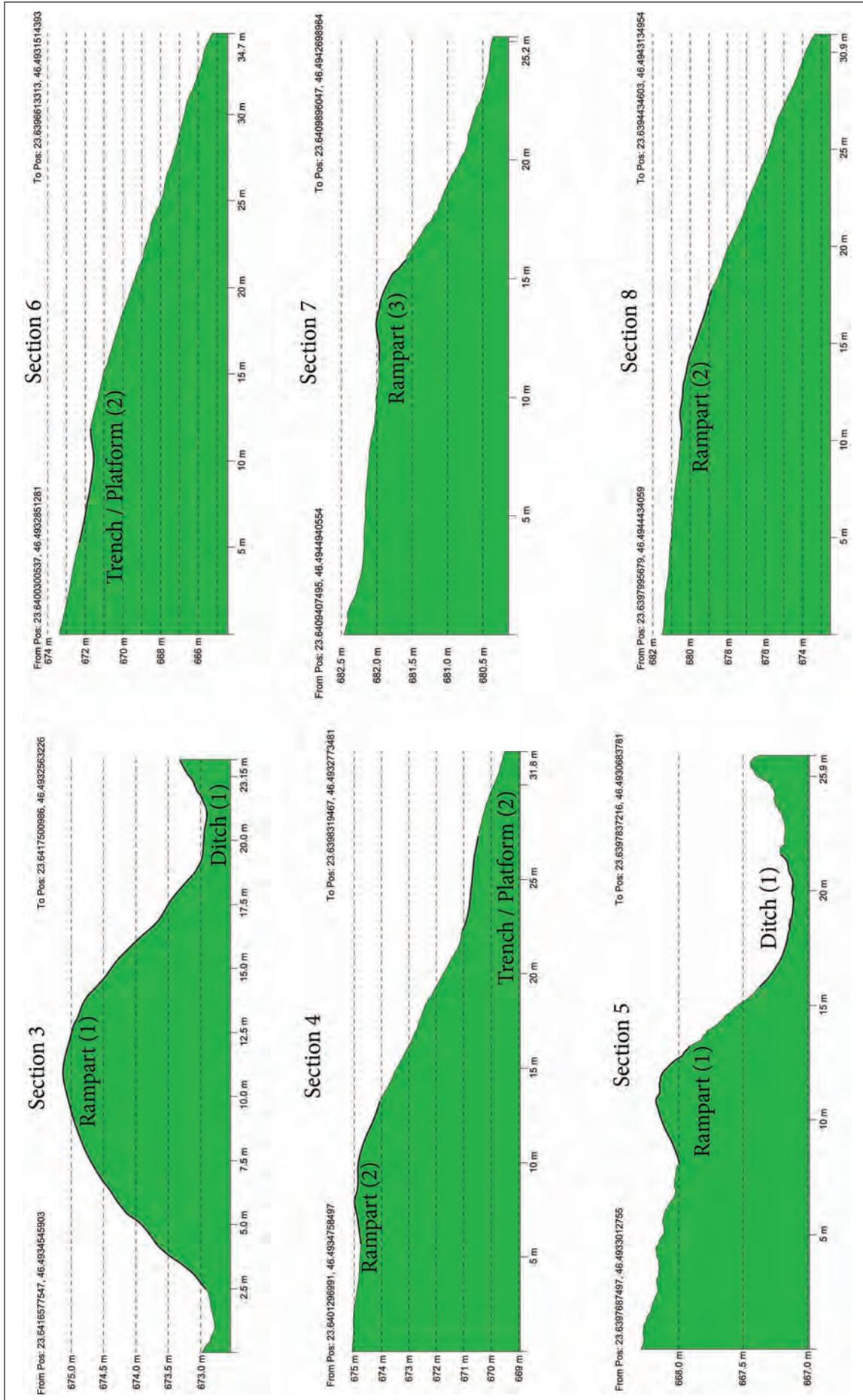
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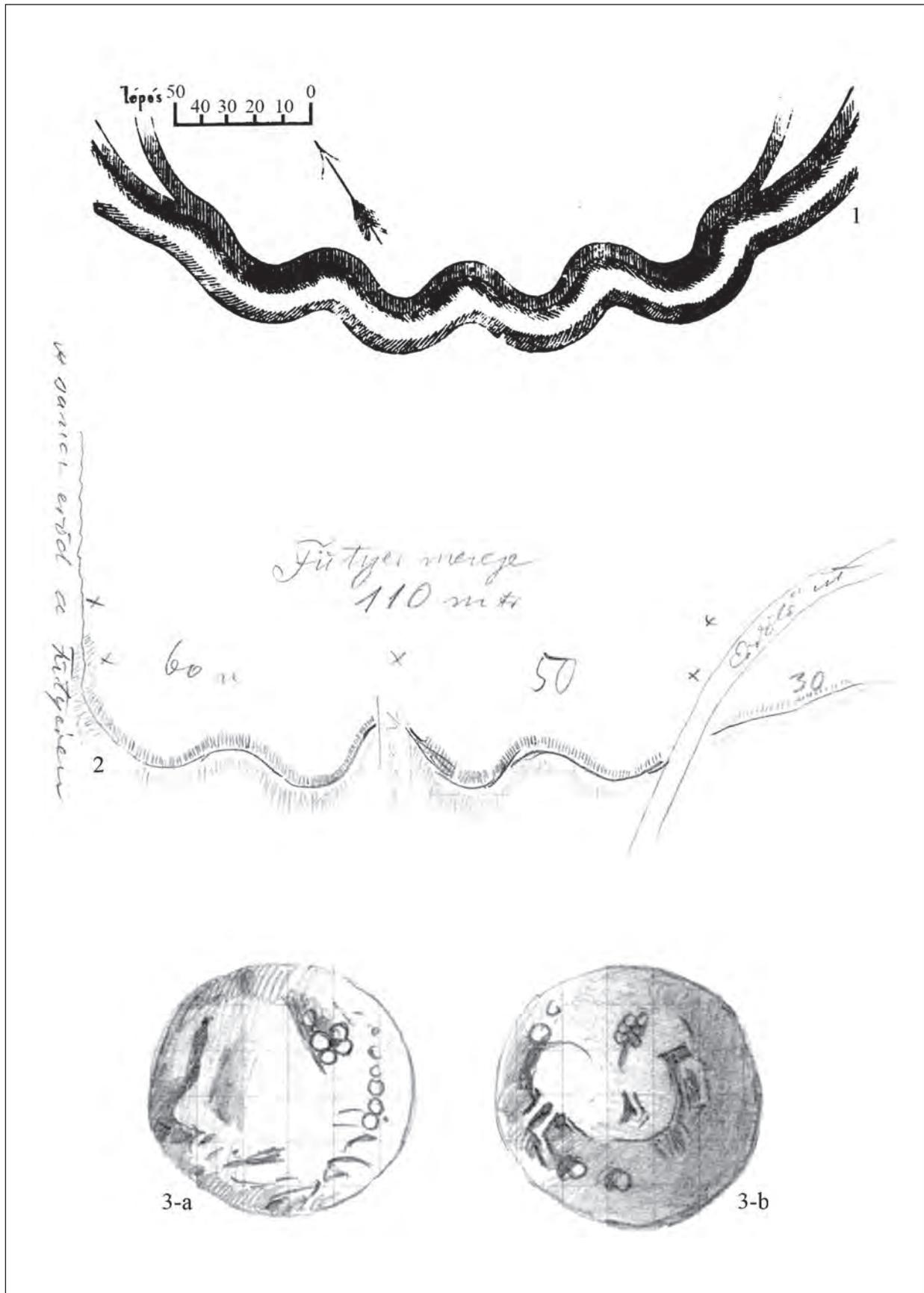
From Pos: 23.6417986365, 46.4933333140 **Section 2** To Pos: 23.6418638249, 46.4932271499



Pl. XI. Elevation profiles and Digital Surface Models (DSM) of various features identified on the ground at the Fluierişte – Şanţul Păgânilor site.



Pl. XII. Elevation profiles of various features identified on the ground at the Fluierişte – Şanul Păgânilor site.



Pl. XIII. 1 – The East-West Rampart no. 1 as illustrated in Orbán Balázs's *Description of Székely Land* (Orbán 1871, 179); 2 – The East-West Rampart no. 1 as illustrated in Téglás István's archaeological records (Bajusz 2005, 419, 28/43–44, ábra); 3 – The silver coin from the Fluierişte site, illustrated in Téglás István's archaeological records (Bajusz 2005, 428, 51/184, ábra).