
THE EMERGENCE OF INLAND SETTLEMENTS IN NORTHERN DOBRUJA AT THE END OF THE ARCHAIC PERIOD. A NEWLY SURVEYED SETTLEMENT ON CELIC DERE VALLEY

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Abstract: In addition to the decades-long known archaeological ensemble (consisting of a 6th-3rd centuries BC settlement and tumuli necropolis) on Celic Dere valley, in Northern Dobruja, a second settlement (Cassiana) of the same period was recently documented – just 2.5 km to the east – on the same river valley, right near Celic Dere Monastery. The newly surveyed settlement at Celic Dere Monastery/Cassiana was field assessed, in 2013 and 2014, by geophysical survey (magnetic method), aerial photogrammetry and systematic collecting of surface materials. LiDAR data was used as an integrative background of the landscape analysis. The discovery is meaningful because it gives the opportunity to discuss once more, and with enhanced elements, the impact of Greek colonisation in western Pontus upon the aggregation processes of local populations. The proximity of two contemporaneous large settlements characterized by the same rich mix of materials (consisting of Archaic and Classical periods amphorae fragments, Archaic monochrome grey wheel-made ware and hand-made local pottery of late Hallstatt tradition), even if for the Monastery settlement the considered pottery originates only from surface surveys, reveals the consistent demography of the communities inhabiting the high hills bordering the Danube, their endurance in the same places from late Hallstatt till early Hellenistic period, and their organisation in habitation nuclei based on steady markets directly connected with the western Black Sea Greek colonies, of which Orgame and Istros were located at ca. 50-60 km to the south-east. The two settlements on Celic Dere valley, for which a peak of early activity seems to be the end of the 6th century BC and the 5th century BC, mainly exploit the proximity of a major Danube ford (at Isaccea, 20 km north) and the existence of an important inland route going towards the former Black Sea golfs – now the lakes Babadag-Razim-Sinoe. They represent a nucleus within a larger group of emerging settlements, at the end of the Archaic period, throughout Northern Dobruja – either near Danube (like Revărsarea Tichilești or Novoselskoe – on the other shore), far inland, in the high plateaus (Beidaud) or in a 20-8 km range around Istros and Orgame and the former navigable golfs (Tariverde, Nuntași, Vișina, Sinoe, Vadu). If the last category was often interpreted as Greek establishments, results of colonial activity, inhabited by an ethnically mixed population, the sites of the same type, located in the Danube area, point to the reality of a more extensive process of social development and demographic growth happening inland, linked to a specific period – end of the 6th-5th century BC.

Rezumat: Pe lângă bine-cunoscutul ansamblu arheologic format din așezare și o mare necropolă tumulară din sec. VI-III a.Chr., din Valea Celicului în nordul Dobrogei, cercetat încă din anii 1980, a

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fost recent pusă în evidență o a doua așezare din aceeași perioadă, la doar 2,5 km spre est de prima, pe aceeași vale, chiar lângă Mănăstirea Celic Dere. Nou cercetata așezare de la Celic Dere Mănăstire/Cassiana a reprezentat, în 2013 și 2014, obiectul unei investigații geofizice (prin metoda magnetică), al unui studiu aerofotogrammetric și unei periegeze sistematice. Date LiDAR au fost folosite drept suport integrator al întregii analize spațiale. Descoperirea este semnificativă deoarece oferă ocazia de a discuta încă o dată, cu unele date îmbunătățite, despre impactul colonizării grecești în Pontul vestic asupra proceselor de agregare socială a populațiilor locale. Localizarea foarte apropiată a celor două așezări contemporane reprezentate de același amestec bogat de materiale (format din fragmente de amfore din perioadele arhaică și clasică, ceramică cenușie lucrată cu roata și ceramică modelată cu mâna de tradiție hallstattiană târzie), chiar dacă pentru așezarea de la Mănăstire este vorba doar de materiale colectate în periegeză, dovedește demografia consistentă ce caracteriza, la sfârșitul primei epoci a fierului și la începutul celei de-a doua, comunitățile ce au ocupat dealurile aflate imediat la sud de Dunăre. O astfel de asociere evidențiază, totodată, rezistența comunităților respective în aceleași locuri centrale pe parcursul unei perioade relativ lungi, precum și organizarea lor agregată în nuclee – bazate pe funcționarea unor piețe comerciale stabile, direct conectate cu coloniile grecești din vestul Mării Negre, dintre care Orgame și Istros se aflau la 50-60 km spre sud-est. Cele două așezări de pe valea Celicului, pentru care un vârf de activitate pare să fi fost sfârșitul sec. VI și sec. V a.Chr., exploatează în primul rând vecinătatea unui mare vad al Dunării (Isaccea, ca. 20 km spre nord) și funcționarea unei importante rute de interior către fostele golfuri marine, astăzi lacurile Babadag-Razim-Sinoe. Ele reprezintă un nucleu unitar, parte a unui grup mai mare de așezări în care activitatea începe la sfârșitul perioadei arhaice în Dobrogea de Nord – fie în apropierea Dunării (ca în siturile de la Revărsarea Tichilești ori Novoselskoe, pe malul opus al Dunării), departe în interior pe platourile înalte (Beidaud), ori într-o rază de 8-20 km în jurul coloniilor Istros și Orgame și golfurilor navigabile (precum Tariverde, Vișina, Sinoe, Vadu). Dacă siturile din ultima categorie au fost adesea interpretate drept stațiuni grecești fondate în teritoriul coloniilor și ocupate de o populație mixtă etnic, siturile de același tip din zona dunăreană nordică indică faptul că este vorba despre un proces mult mai larg de dezvoltare socială și creștere demografică petrecut în interior, legat în mod specific de sfârșitul sec. VI a.Chr. și începutul secolului următor.

Keywords: Late Iron Age settlements; Late Hallstatt; commercial contacts; Greek colonisation in western Black Sea; demography; amphorae; grey ware; LiDAR; geophysical survey.

Cuvinte cheie: a doua epocă a fierului; Hallstatt târziu; contacte comerciale; colonizarea grecească în vestul Mării Negre; demografie; amfore; ceramică cenușie; LiDAR; geofizică.

PREAMBLE

When the first Milesians settled in the western Black Sea, in the vicinity of the Danube mouths, at Orgame and Istros, around the middle of the 7th century BC, the activity in all the major settlements of the Early Iron Age belonging to the late phase of the Babadag culture, be they inland, along the Danube or on the shores of the ancient littoral, had already ceased.¹ This did not mean the population vanished. It meant

¹ Ailincăi 2010; Ailincăi 2013, 57-58; Ailincăi 2016.

rather that the context became unfavourable to social aggregation and authority mobilisation.² It took almost two centuries³ for settlement life to be restored in full again inland, only in part on the same spots as before⁴ or in their close vicinity.⁵ The majority of settlements in which indigenous material reappears emerge however in places without a previous Babadag occupation,⁶ close to Istros and Orgame, in locations connected to the navigable former gulfs of the Black Sea – now the lagoon system Razim-Sinoe (Fig. 1). In total, for northern Dobruja there are known at least ten sites of non-funerary character with materials dated starting with the 6th century BC⁷ or rather late 6th-5th centuries BC. They share a remarkably consistent set of features: location on river/lake terraces; lack of fortifications;⁸ the prevalence of pit assemblages; and, mainly, the specific association of indigenous hand-made pottery of Late Hallstatt tradition with a significant, sometimes predominant⁹ quantity of Greek vessels – regularly Archaic amphorae, grey monochrome wheel made wares, but also, in the richest sites – Attic black figure, Corinthian¹⁰ and Rhodo-Ionic pottery. Bronze monetary signs of the arrowhead type were often found in these contexts, including deposited in hoards.¹¹

Those sites¹² located in a 8 to 20 km distance from Istros and Orgame were habitually considered Greek establishments in the hinterland, either inhabited by Greeks alone¹³ or founded in collaboration with locals, thus of a ‘Greek-Indigenous’

² On the same note see Avram 1996, 242 or Simion 1997, 235, 241.

³ ¹⁴C dates for Babadag sites do not cross the 800 BC limit as the latest (Ailincăi *et alii* 2019, 180).

⁴ Revărsarea–Cotul Tichilești (Baumann 1995, 228-268), Beidaud (Ailincăi 2020).

⁵ Celic Dere in proximity of Telița Amza (Jugănar 2003).

⁶ Even if not completely new: at Tariverde an earlier Neolithic occupation (Hamangia) can be assumed (Vulpe 1955, 549, fig. 22).

⁷ 5th century BC was not attested in Tariverde (Vulpe 1955, 547).

⁸ Beidaud is an exception; however, taking into consideration the rather limited research undertaken in these sites overall, it may be just a matter of state of knowledge.

⁹ At Tariverde the hand-made pottery represents only 10-15% of the total (Preda 1972, 81; Bîrzescu 2012, 82), while at Vișina was evaluated at 30% (Mănușu-Adameșteanu 1983, 175).

¹⁰ Mănușu-Adameșteanu 1996.

¹¹ Talmațchi 2010, 70-73. The most relevant example is the one from Vișina (Mănușu-Adameșteanu 1980, 159).

¹² Nuntași II (Domăneanțu 1993), Tariverde (Bîrzescu 2012; Vulpe 1954; Vulpe 1955; Preda 1972); Vadu (Irimia 1975, 95), Sinoe-Zmeica (Dimitriu 1972, 119; Stoian 1957, 197-198), Corbu de Sus (Irimia 1975, 102), Vișina (Mănușu-Adameșteanu 1980; Mănușu-Adameșteanu 1983; Mănușu-Adameșteanu, Mănușu-Adameșteanu 1992).

¹³ Bîrzescu 2012.

character,¹⁴ anyhow direct results of the Milesian colonial activity in securing resources and territory.¹⁵ The proximity to Istros and the high occurrence of Greek materials were taken as evidence for Greek effective presence and involvement. If this were indeed the case, a large number of sites and of the territory to be associated with a potential Istrian control would have required additional demographic resources and, therefore, the possible participation of new waves of colonists.¹⁶ Unfortunately, none of these sites has been yet systematically published beyond short reports and selections of materials,¹⁷ while several were just mentioned.¹⁸ Many questions remain unaddressed, not only those concerning the ethnicity of the inhabitants or founders (which seemed the preferred topic of their investigators), but perhaps the very nature of some of the sites and, consequently, the medium in which colonial contact unfolded. Ritual practice as common ground and the honouring of same sacred spaces – developed in time from neutral meeting points into steady markets – remain for now an overlooked model. For example, the earliest to emerge were Nuntași II¹⁹ (around 600 BC) and neighbouring Tariverde (towards the middle of the 6th century BC),²⁰ both located in a 7 km distance to one another, on the valley of Iunan Dere, a small stream, rich in springs, flowing into the lagoon, 7 km south of Istros. The strong depositional character of some of the discoveries in both sites deserves more attention, pointing to a potential different dynamic of the Greek-Indigenous early contacts.

¹⁴ Irimia 1975, 102. The incidence of hand-made pottery and of larger pits regarded as dugouts was seen as the trademark of indigens (Vulpe 1954, 106-108; Preda 1972, 82; Avram 1996, 246). A critique in Bîrzescu 2012, 82 – handmade pottery could have been a colonial loan for quick needs not necessarily the ethnic presence of the locals. Also, Avram (2006, 63) believes that dugouts were known and used by Archaic Greeks. The association of inhumation burials to some of these sites was also interpreted as a sign of ‘Greekness’ in contrast with cremation seen as a local practice (Avram 2006, 62-63). Nevertheless, this interpretation does not take into consideration the fact that inhumation is often found in indigenous contexts in Hallstatt D environments. See further the discussion about Celic Dere.

¹⁵ Avram 2006, 62-63.

¹⁶ Avram 2006, 63.

¹⁷ Monographs for Tariverde (I. Bîrzescu) and Celic Dere (Simion, Șîrbu, Ailincăi) are in preparation. New research at Caraburun/Acic Suat (Baralis *et alii* 2017).

¹⁸ Vadu (Vulpe 1953, 145-146), Corbu de Sus, Sarinasuf (Irimia 1975, 102), Sinoe-Zmeica (Dimitriu 1972, 119; Stoian 1957, 197-198), Sinoe-Insula Lupilor (Avram *et alii* 1985).

¹⁹ Domăneanțu 1993, 59, especially footnote 2.

²⁰ The earliest datable items were Corinthian wares (580-570 BC). The most recent review in Bîrzescu 2012 with all previous bibliography and chronological commentary.

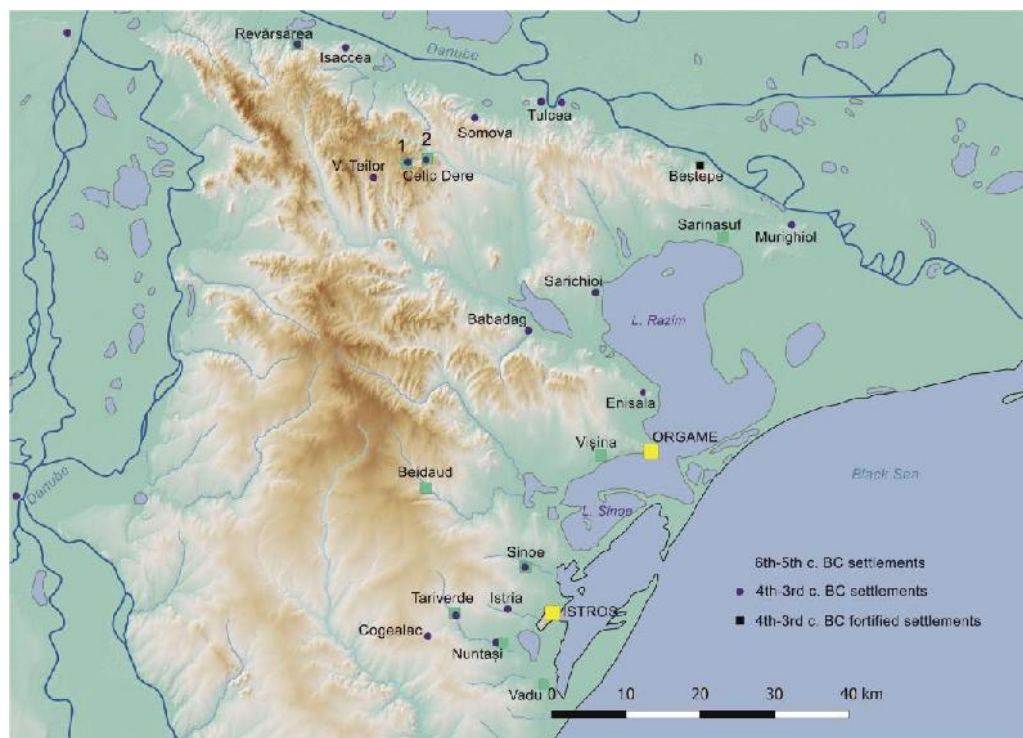


Fig. 1. Settlements (6th-3rd centuries BC) in Northern Dobruja.

At **Tariverde**, the most numerous features belonging to the Archaic layer were the small pits with wider bottoms (1.5-2 m in diameter) and narrower mouths (0.45-0.60 m), many of which were carefully dug, having burnt interiors. Initially, the intentional excavation and filling of these pits were interpreted as proofs of their ritual nature²¹, but very soon they were reinterpreted as granaries.²² Tariverde would have been thus an agricultural centre created in the territory of Istros, eventually to exchange products with the locals.²³ The larger pits, even those with irregular bottoms/shapes, were explained as dugouts or partial dugouts. Most of the Archaic material was found in pits, including a terracotta statuette of a feminine deity, a zoomorphic figurine, entire vessels and fragmentary pottery either Greek (Amphorae, Attic black figures,

²¹ Vulpe 1954, 104.

²² Berciu, Preda 1959, 320. Mănucu-Adameşteanu 1980, 157 same interpretations for pits with burnt interiors at Vişina.

²³ Preda 1972, 85. Bîrzescu (2012, 88-89) argues that the position is hidden, remote to roads and that it could not serve as a commercial site with an Indigenous hinterland.

grey wares, Corinthian vessels) or hand-made,²⁴ bronze monetary signs of the arrowhead type, arrowheads, glass beads, grinding stones, spindle-whorls, loom weights, animal bones, in many cases associated with fragments of burnt adobe walls or of fireplaces. Relevant to mention is also a group of three Archaic pits – two containing entire dogs' skeletons and the third a human cramped in its filling. Above the human skeleton, a fireplace was discovered.²⁵ From other reports, we know of one more dog skeleton²⁶ and one more human in a flexed position.²⁷ This kind of deposits and association of contexts are typical finds for the Thracian fields of pits phenomenon²⁸ attested in tens of sites, especially in the Archaic and Classical period for southern Thrace. This is not to imply that Tariverde was a field of pits, but that a sanctuary-like area could have stood at the heart of the developing settlement and that the 'founding' act was based on local values. An instance of the model can be found in Durankulak, in the territory of Callatis during the Hellenistic period, where a field of pits was associated with a contemporaneous sanctuary of Kybele.²⁹

A rural sanctuary was identified, though, in neighbouring Nuntași II, for the Hellenistic period.³⁰ The sanctuary included a rectangular stone building under the pavement of which a deposit was found consisting of entire vessels (Greek and local), amphorae, a group of terracotta statuettes (belonging to Kybele, Nike), loom weights. The sanctuary building was integrated in the settlement's general planimetry grounded in stone architecture. Earlier layers (four in number) in the site were assigned to the 6th and 5th centuries BC, but their features remain harder to grasp, as there is so far no dedicated publication.³¹ A hoard of 240 bronze arrowhead monetary signs deposited in a local hand-made vessel is known to come from the same site.³² Another hoard of monetary signs was found in the 6th-5th centuries BC settlement at Vișina, on the Golovița lake shore, a site in which the most numerous type of found features were the pits, including the type with burnt interiors and also the larger pits considered dugouts.

²⁴ Berciu, Preda 1961, 276-277, fig. 3-4. A large entire hand-made vessel was found in 'dugout' 5.

²⁵ Berciu, Preda 1961, 277-278.

²⁶ Vulpe 1955, 545.

²⁷ The flexed skeleton datable in the Hellenistic period was associated with a stone structure (Vulpe 1954, 102-104).

²⁸ Bozkova 2016; Georgieva 2015; Sideris, Tonkova 2019; Tonkova 2009.

²⁹ Todorova 2016, 35-50; 125-136.

³⁰ Domăneanțu 1993.

³¹ The periodic visitation of these sites with a recognized sanctuary like value was customary, with the episodes separated by centuries.

³² Talmațchi 2010, 85, nr. 13 with bibliography.

More of a prologue to the current investigation, the introductory commentary was meant to highlight that the phenomenon of a revival of the indigenous material presence in sites of a non-funerary character around the middle to late 6th century BC, at the Lower Danube, is far from clarified and that further research in the field would surely benefit of newly collected data samples. Questions regarding the nature of sites, the existence of fortifications, of earlier habitations, demography, religion and social aggregation, continuity vs. discontinuity and colonial contact are all still on the table. In this context, the discovery and systematic documentation of a new settlement belonging to the group, like it is the case with our project here – Celic Dere Monastery Cassiana (Tulcea county) – may seem significant. Its location – in the Niculițel Hills, 20 km south of the Danube and 60 km north-east of the littoral – is especially important. It enlarges the perspective, from a phenomenon focused on colonial activity in the territory of Istros to a wider trend of local community resurrection under the attraction exercised by the Greek presence in western Pontus as a source of wealth, trade, political contact and, ultimately, of status leading to social aggregation. In this way, the emergence of settlements inland, at the Lower Danube, at the end of the Archaic period, can be seen not only as the result of action from one direction, but from two directions, with an active indigenous population motivated to resurface and become once more materially visible.

INVESTIGATING CELIC DERE VALLEY

The surveyed site, conventionally named ‘Cassiana’, was identified and documented in the field in 2013 and 2014, immediately west of the isolated monastic settlement Celic Dere (Tulcea county), founded ca. 1840 (Fig. 2-4). The investigations were based on initial information provided by the leading researcher of the area, Gavrilă Simion.³³

Celic Dere is a small stream flowing west – east in the heart of Niculițel Hills, between the larger valleys of Taița and Telița (Fig. 3). Remote, wild, and forested as it looks now, the region was characterized in the past by a different road network potential. The natural developed hilly ridges, aligned north – south, were favourable to the inland circulation between the major ford over the Danube, at Isaccea, 20 km to the north, and the littoral, 60 km to southeast.³⁴ The region had entered the archaeological repertoires associated with Late Iron Age discoveries since the 1960s, when a 3rd century BC tumulus with multiple cremations in urns was researched in the vicinity, at Telița village.³⁵ An inhumation under another tumulus, covered with

³³ Simion 1995a (reprinted as Simion 2003a, 213-216).

³⁴ Sîrbu *et alii* 2008.

³⁵ Simion, Cantacuzino 1962.

stones and having as grave goods a storage vessel and an arrowhead datable 6th-5th centuries BC was identified in 1987 at Poșta, close to where Celic Dere flows into Telița.³⁶

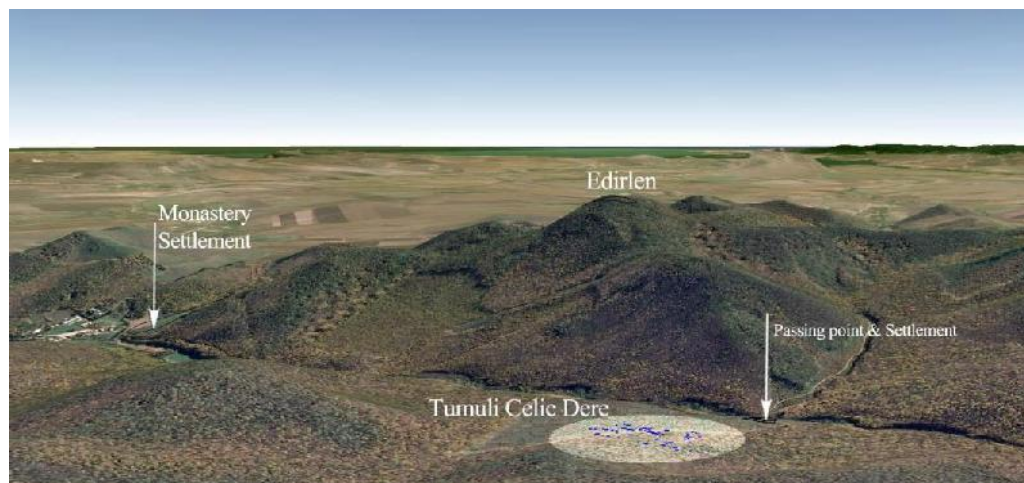


Fig. 2. Archaeological sites on Celic Dere valley – Google earth view towards SE.

The valley became indeed an acknowledged archaeological reference in the late 1980s when archaeologist Gavrilă Simion³⁷ discovered and excavated (till 2001, with interruptions) a large archaeological ensemble consisting of a settlement and necropolis numbering at least 86 biritual small tumuli with stone coverings and other tens of flat graves.³⁸ The ensemble is located 2.5 km upstream from Celic Dere Monastery, on the river's left bank. In both sites, located in 300 m distance one of another, there were identified Archaic, Classic, and early Hellenistic amphorae and grey monochrome wheel-made wares, in association with hand-made pottery of Thracian tradition, attesting site activities from late 6th century towards the middle of the 3rd century BC.

The site's trademark are the late 6th-5th century BC inhumation burials in large shallow pits dug under small tumuli covered with stone cairns, with grave goods such as *akinakai*, arrowheads and sandstones. Towards the end of the 5th century BC, cremation burials in urns (in and around tumuli) became prevalent, some exhibiting the same inventory as the inhumation burials.³⁹

³⁶ Lăzurcă, Simion 2000.

³⁷ Simion 1992; Simion 1997; Simion 2000.

³⁸ For the estimation of the number and types of graves see Șîrbu *et alii* 2021.

³⁹ Șîrbu *et alii* 2021.

While in the latest phase the Celic Dere necropolis resembles the large cemetery of Enisala,⁴⁰ the 6th-5th centuries BC inhumation graves with pits filled with stones, with sandstones and grey monochrome pottery placed at the legs, find similarities in other small groups of graves located in the proximity of settlements of the same date, like Isaccea⁴¹, Ciucurova⁴² and Corbu de Jos.⁴³

For Gavrilă Simion the most significant elements evidenced at Celic Dere were those related to Babadag tradition pottery,⁴⁴ documented in late Archaic contexts, inside the settlement, attesting the survival and continuity of local communities in same sites;⁴⁵ and the identification of certain features of North-Pontic inspiration (objects and funerary rite) which might raise the questions regarding the presence of a Scythian group at the Lower Danube during the second and third quarters of the 5th century BC, sedentary and assimilated by the local Getae population.⁴⁶

Unfortunately, Gavrilă Simion died in 2010, before managing to complete and publish in a monographic form all his excavations. Nevertheless, the available data still manages to outline the image of a rich Northern Thrace multi-generational community, transitioning smoothly between Hallstatt D and Classic Late Iron Age cultural realities.

The research was resumed in 2006 by a new team lead by Valeriu Sîrbu⁴⁷ in collaboration with the University of Rzeszów. Ten more campaign followed, focused especially on recovering data in the necropolis⁴⁸ and on the spatial analysis of the entire ensemble.⁴⁹ On this occasion, several surveys were undertaken as well in the neighbouring region leading to the documentation of additional sites of various ages.⁵⁰

⁴⁰ Simion 1971.

⁴¹ Simion 2003b.

⁴² Simion 1995b.

⁴³ Irimia 1975, 95-102.

⁴⁴ An ongoing analysis of the ceramic material originating from Simion's excavations, made by Sorin-Cristian Ailincăi, does not seem though to support this hypothesis, the polished black ceramic of late Hallstatt tradition being identified only in small quantities.

⁴⁵ Simion 1997.

⁴⁶ Simion 2003a, 215.

⁴⁷ The research team included Maria-Magdalena Ștefan, Dan Ștefan, Tomasz Bochnak, Sorin-Cristian Ailincăi, Gabriel Jugănar and Andrei Soficar.

⁴⁸ The results of the newer excavations in the necropolis and overall syntheses of older data have been published in Sîrbu *et alii* 2013; Sîrbu *et alii* 2021; Ștefan 2010.

⁴⁹ Sîrbu *et alii* 2008.

⁵⁰ Sîrbu *et alii* 2018.

THE SETTLEMENT ON CELIC DERE VALLEY

The settlement investigated by Gavrilă Simion on Celic Dere valley was located on a hilly terrace, completely forested, with three steep slopes, directly above the only natural passing point allowing a north – south crossing (Fig. 2-3). A traditional forest road following the ridges, recorded in the 1970s Romanian Topographic map (D1 in Fig. 3b), evidences the well-exploited topography by both ancient settlement and necropolis. On the same road, but on the opposite mountainside, the fortification of Edirlen is located (dated 10th century AD, with earlier 1st century BC finds).⁵¹

At Celic Dere, no fortification elements were identified to date; however, the limits of the site are far from clear. Excavating about 700 sqm on the forested plateaus, Simion assumed the settlement covered ca. 4 ha. During the most recent investigations, though, geophysical prospection (magnetic susceptibility measurements), carried on by Dan Ștefan, attested that the anomalies with high archaeological potential stretch out, in fact, on a surface at least three times larger (Fig. 5/b).⁵²

Simion reported the existence of two habitation layers: one dated late 6th-first half of the 5th century BC, and the other second half of 5th-4th century BC with some extensions till middle 3rd century BC. According to him, during the first phase, the circular dugouts with a 6 m diameter were the typical dwellings, while in the later phase, fashionable became the surface dwellings with rectangular shapes. The surface dwellings were identified based on evidencing agglomerations of burnt adobe walls. Fireplaces and pits, including of the type with interior walls prepared by adding clay and burning it, like in Tariverde and Vișina, were as well registered.⁵³ A dugout belonging to the first phase was found burnt (?) or filled with fragments of burnt adobe walls and ash.⁵⁴ Large quantities of vessels (including polished black hand-made wares in the Babadag tradition), fragmentary, but taking into consideration the drawings, some also complete, of large dimensions, or miniature, were found on the bottoms or in the filling of dugouts. This unusual situation was explained as the result of a sudden attack of the settlement, surprising the inhabitants who left their possessions in place.⁵⁵ While not impossible, we cannot stop wondering, though, if this apparent positive selection of materials was not, rather, the result of a depositional activity.

⁵¹ Șîrbu *et alii* 2018.

⁵² Șîrbu *et alii* 2016, 296, pl. 2 – for magnetometry in the site.

⁵³ Simion 2003a, 222.

⁵⁴ Simion 1997, 228, fig. 3.

⁵⁵ Simion 2003a, 222.

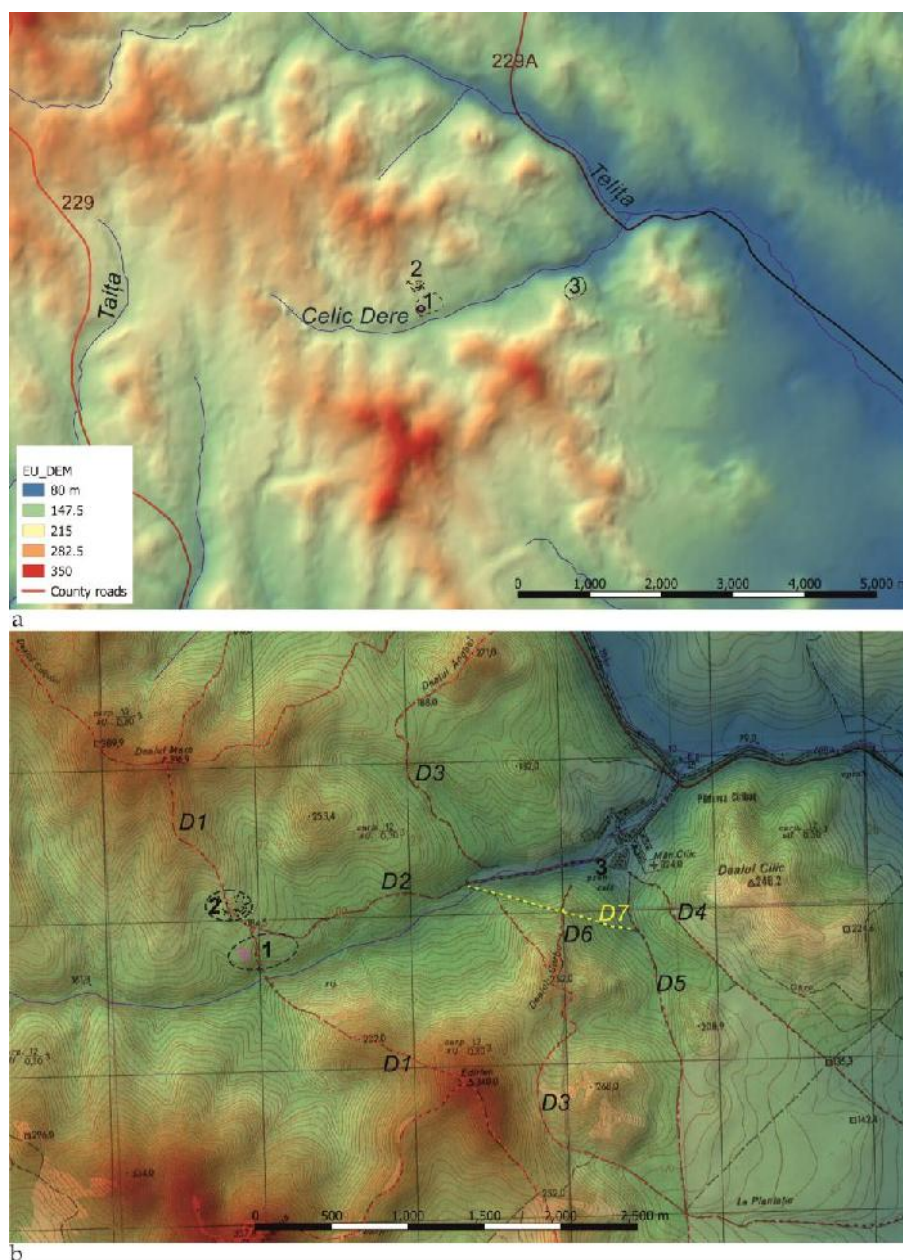


Fig. 3. a. Relief map in the area of Celic Dere valley (EU-DEM data); b. network of forest routes (D1-7) superimposed over the Romanian topographic map 1975; D7. modern road; D1-6. follow natural relief features; 1. Celic Dere settlement; 2. Celic Dere tumuli necropolis; 3. Monastery Cassiana settlement.



Fig. 4. Panoramic low altitude aerial images of Celic Dere valley: a. towards west; b. towards east.

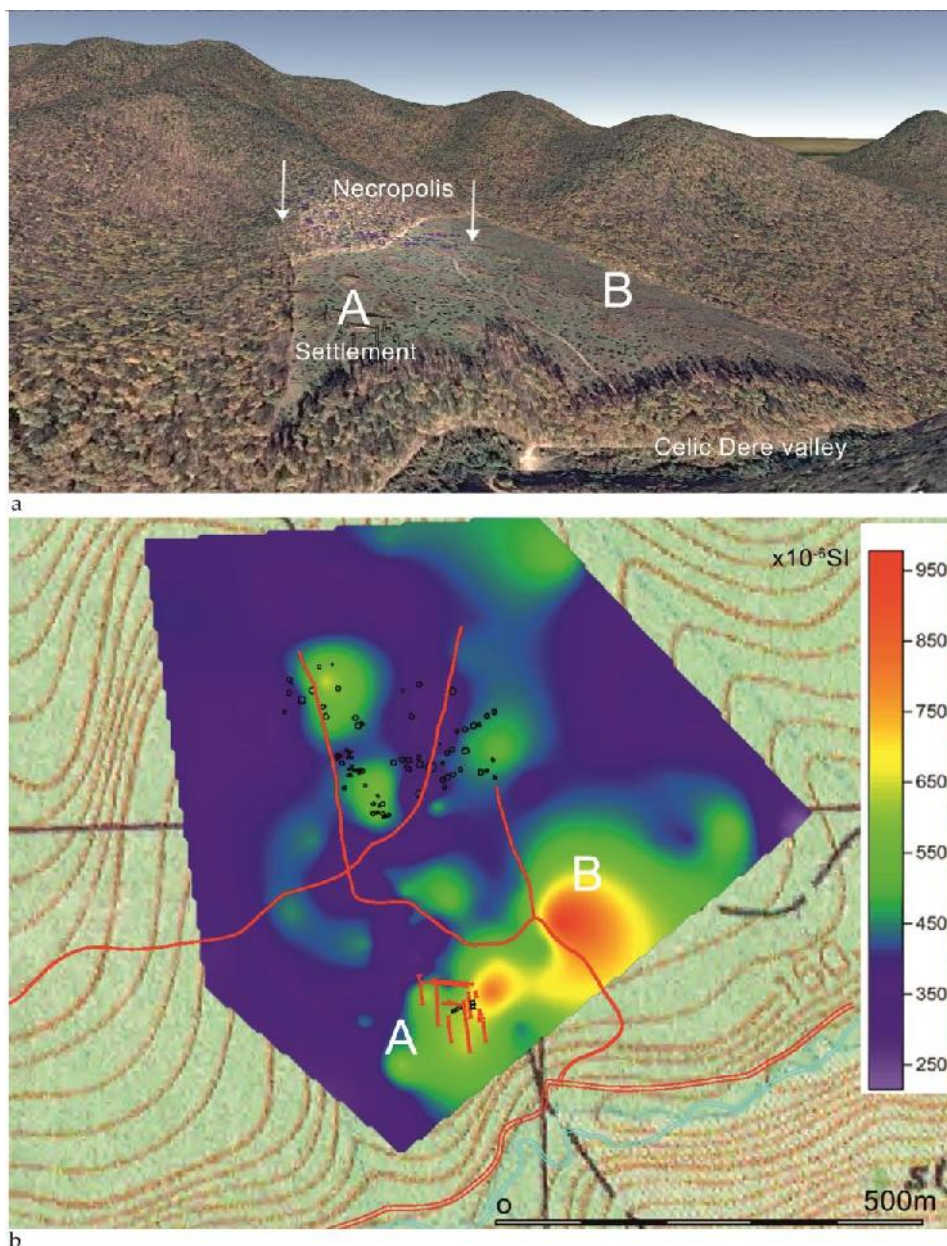


Fig. 5. a. Google Earth view (towards north) of Celic Dere settlement and necropolis; b. apparent susceptibility map (2014) overlapped on the 1975 Topographic Map of the area (1/25000) indicating the existence of a second sector of the settlement (B), in addition to the known one (A) excavated by Simion (1985-2005) and Sîrbu *et alli* (2006, 2013-2015); with black – tumuli; with red – trenches and forest roads.

In our small-sized excavation,⁵⁶ undertaken in the settlement (2013-2015) in trench SXVII (2 × 13 m) located in the same area as Simion's trenches, we noticed the existence of three archaeological layers with a total thickness of 1.15 m, except for the deeper pits. The most recent layer (third), measuring about 50 cm in thickness, contained disturbed archaeological debris - pottery shards of various chronological periods. The layer's inferior level was highlighted by small fragments of burnt adobe walls. Despite the small sized excavated surface, we were able to identify numerous features - 16 pits - several of which were in a situation of cutting each other. Most pits were related to the second layer, dated 4th-3rd centuries BC. These pits were cylindric, with straight walls, measuring 1.50-2 m in diameter. The older pits, cut by the first group, had tronconic profiles with narrower mouths and wider bottoms. Almost all pits contained in their fillings large fragments of burnt and unburnt adobe walls and of fireplaces in significant quantities. For some pits, a careful filling in layers could be noticed. One of the latest pits, C1 (1.8 m diameter, 2 m deep), had walls covered in clay and burnt to red at high temperatures.⁵⁷ It contained a large number of fish bones, a pig skull, fragments from two hand-made large storage vessels, parts of fireplaces and of burnt and unburnt adobe walls.

SURVEY AT CELIC DERE MONASTERY CASSIANA – SPATIAL ANALYSIS. SITE SIZE AND FORTIFICATIONS

The prospected areas were located on the right side of Celic Dere valley, on a gently sloping foothill, close to the spot (800 m west) where Celic Dere river flows into the larger valley of Telița (Fig. 3/a); thus, at the border between the high Niculițel Hills (250-300 m altitude) to the west and the lower lands of Horia-Nălbant Depression (120 m medium altitude) to the east. Despite being so close to the open lands, the site is only barely visible from that direction (Fig. 21/green areal), being surrounded in proximity by higher relief, on all sides. The northern sector of the hill on which the site is located, if not in fact the site itself – see further, is partially overlapped by utilitarian structures belonging to the Celic Dere Monastery (Fig. 4/b), while the central and eastern ones are occupied by a garbage dump and agricultural lot.

The low altitude aerial surveys undertaken with UAVs⁵⁸ (2013, 2014) have helped in obtaining relevant documentation⁵⁹ for a 37 ha areal, regarding the site's geomor-

⁵⁶ Șirbu *et alii* 2014; Șirbu *et alii* 2015; Șirbu *et alii* 2016.

⁵⁷ Șirbu *et alii* 2016, 398, pl. 4/a-d.

⁵⁸ With a self-made quadcopter equipped with a Sony NEX 5R photocamera (16 M/px), flight altitude 100 m, and a GoPro.

phology, its spatial relations with the surrounding natural elements (hydrology, relief) or anthropic structures (roads, Monastery auxiliary facilities), allowing an analysis of the site's shape, size and the possible existence of fortification elements. In 2019 a LiDAR survey extended the available relief data, around the site, to 685 ha (Fig. 8).⁶⁰ A comparative analysis (Fig. 7) of the digital surface model obtained using photogrammetric algorithms out of aerial images and the LiDAR DEM showed they are of comparable qualities, with the latter having the advantage of succeeding vegetation penetration - an essential investigative capability when dealing with the highly forested area of Niculițel Hills (Fig. 4/a). In the case of the Cassiana site, the lower parts of the studied plateau were covered in grass, allowing the application of UAV survey, too, at least in the earlier research stages.

The bulk of the archaeological materials identified west of the Monastery have appeared along the field road (2 in Fig. 6), near the forest margin, thus somewhat in a high and remote spot (30 m above Celic Dere valley, 300 m to the southeast of it). This odd position - middle slope at the foothills of a forested massive - may puzzle and seem unusual. The main contribution of the remote sensing analysis was to have shown that the site might have been larger and more traditionally shaped. The hill where the archaeological materials were found extends downwards, towards north-northeast, forming the familiar triangular-shaped promontory, delimited on two sides by valleys - Celic Dere to the north and a smaller, unnamed valley to the east (Fig. 9/a; Fig. 8; Fig. 7/a). The triangular promontory, slightly elevated above watersheds, was the relief shape commonly used for fortified settlements during the entire Iron Ages, throughout Thrace.⁶¹ Their narrower triangular ends were regularly fortified with one or several transversal barrages (ditch/rampart).

⁵⁹ Orthophotography (0.05 m/pixel resolution) (Fig. 6), Digital Surface Model (including vegetation height) - 0.23 m/pixel resolution (Fig. 7/a), vertical and oblique aerial images, panoramic aerial views (Fig. 4).

⁶⁰ For the LiDAR remote sensing mission, a DA42-MPP aircraft was used, equipped with a Riegl q 780 LiDAR sensor and accessories (Novatel GPS receiver and controller + inertial unit produced by IGI). After georeferencing, the point cloud was classified to separate the ground from vegetation, buildings, and other anthropogenic structures. In the end, several digital terrain models and other processed files with a grid resolution of 0.2×0.2 m per node were generated.

⁶¹ For example, Arnăut 2003.

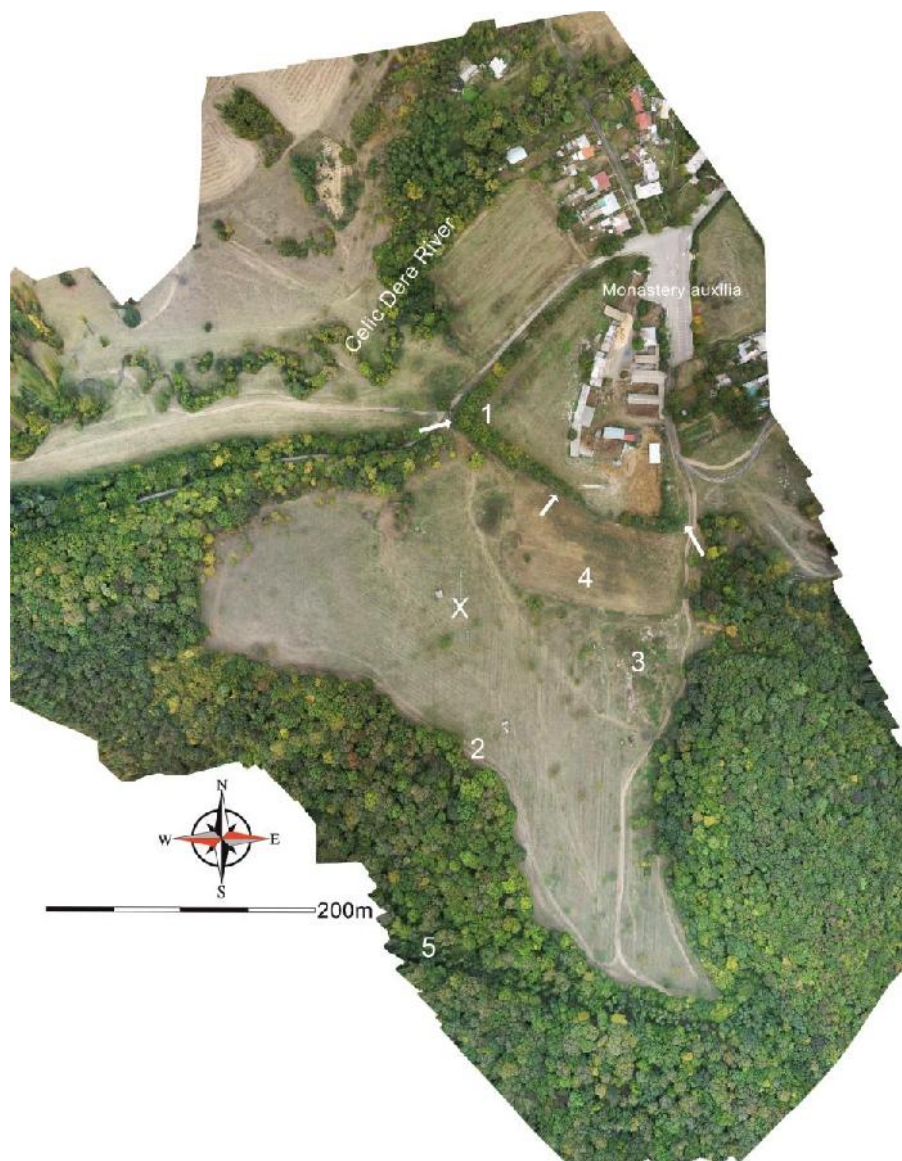


Fig. 6. UAV Orthophotography, October 2014, 0.05 m/pixel resolution: 1. fortification ditch; 2. forest road and area rich in surface archaeological materials; 3. garbage dump; 4. Monastery agricultural lots; 5. modern road (D7 in Fig. 3/b; E in Fig. 7/b); X – finding place for the monetary sign.

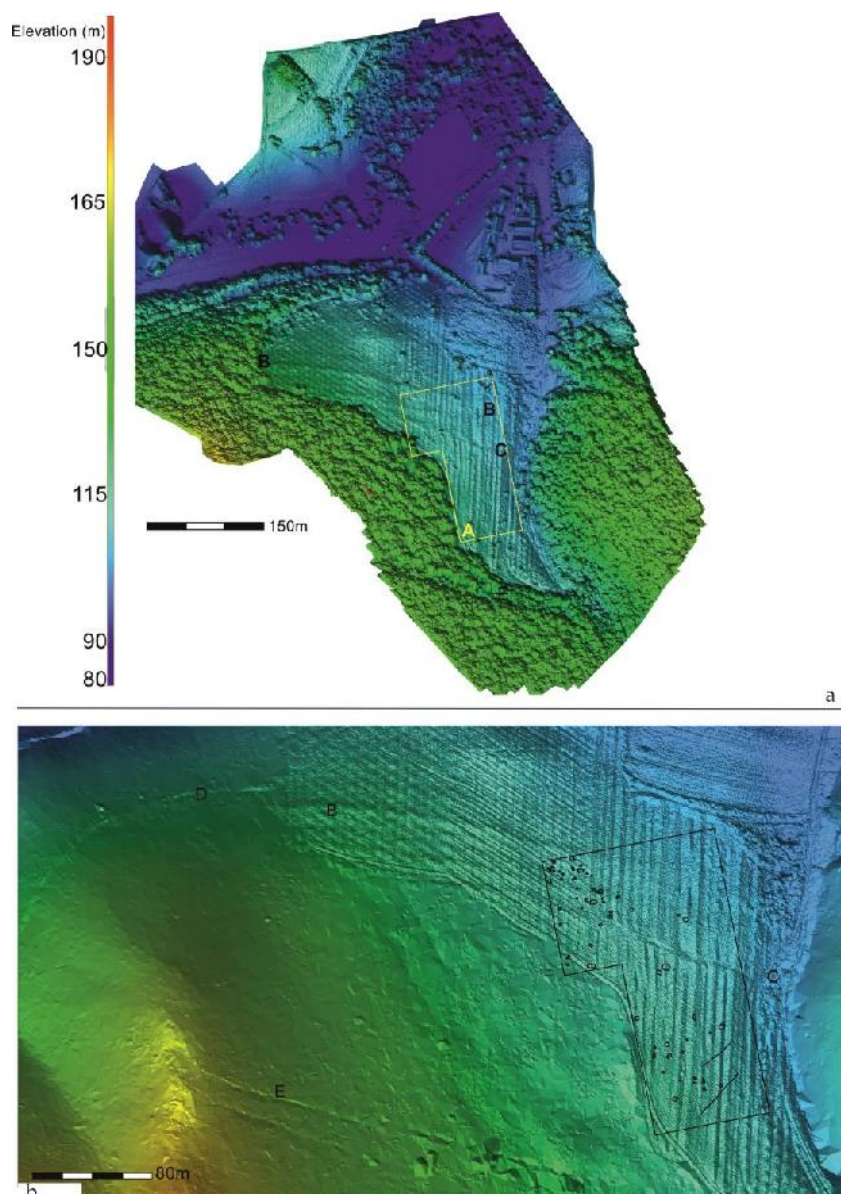


Fig. 7 Celic Dere Monastery/Cassiana site - Digital model of the relief: a. DSM obtained by aerial photogrammetry with UAV (2014); b. results of the magnetic survey interpretation superimposed over LiDAR DEM (2019). A – contour of the magnetic investigated area; B-E – linear relief anomalies.

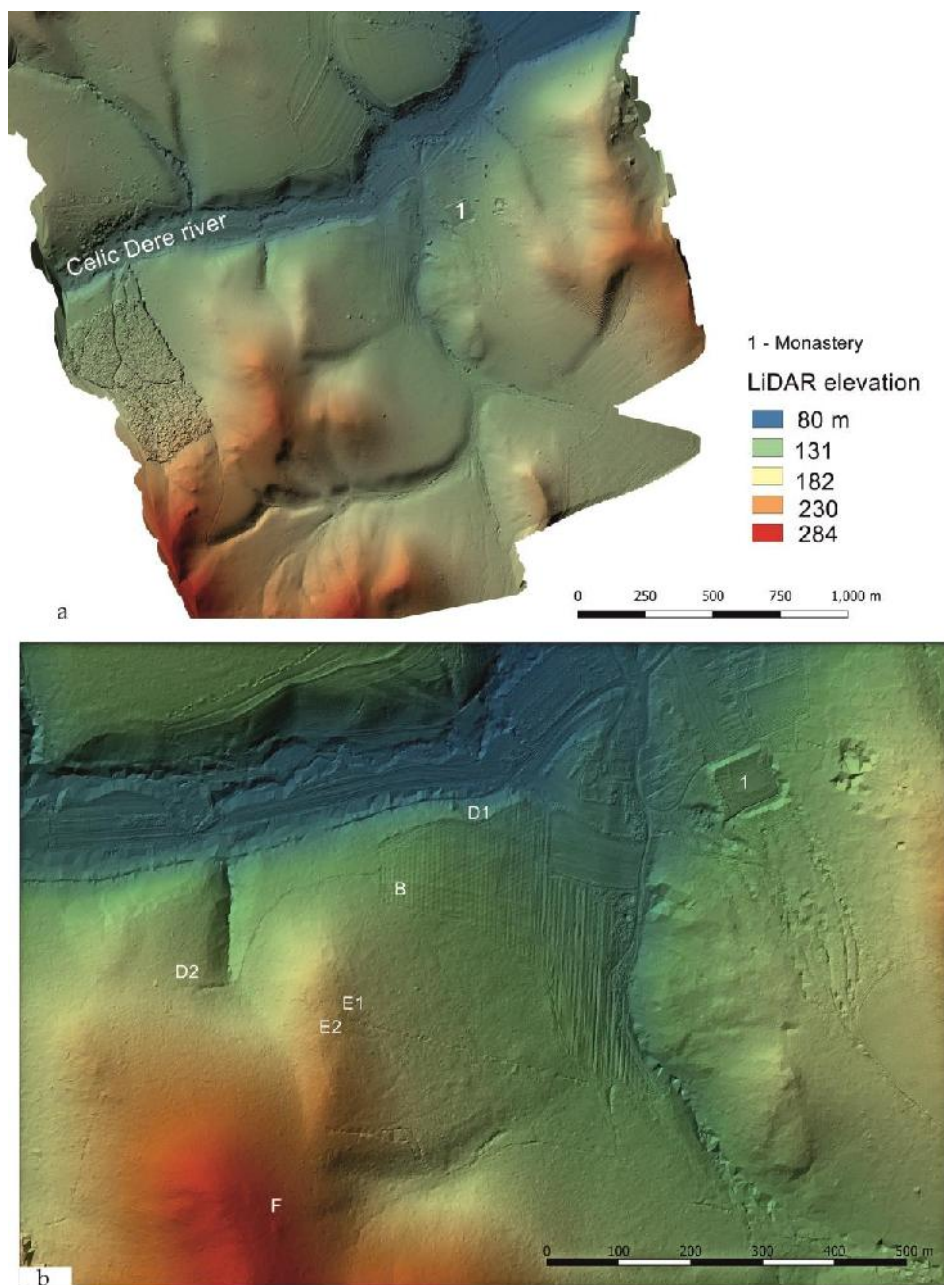


Fig. 8. LiDAR data (2019): B-F. anomalies; F. tumulus?



Fig. 9. Celic Dere Monastery/Cassiana site - topographic maps: a. Romanian Topographic Map 1975 overlaid on top of monochrome shaded LIDAR DEM; b. relief curves (1 m interval) extracted based on LIDAR data (0.3 m resolution).

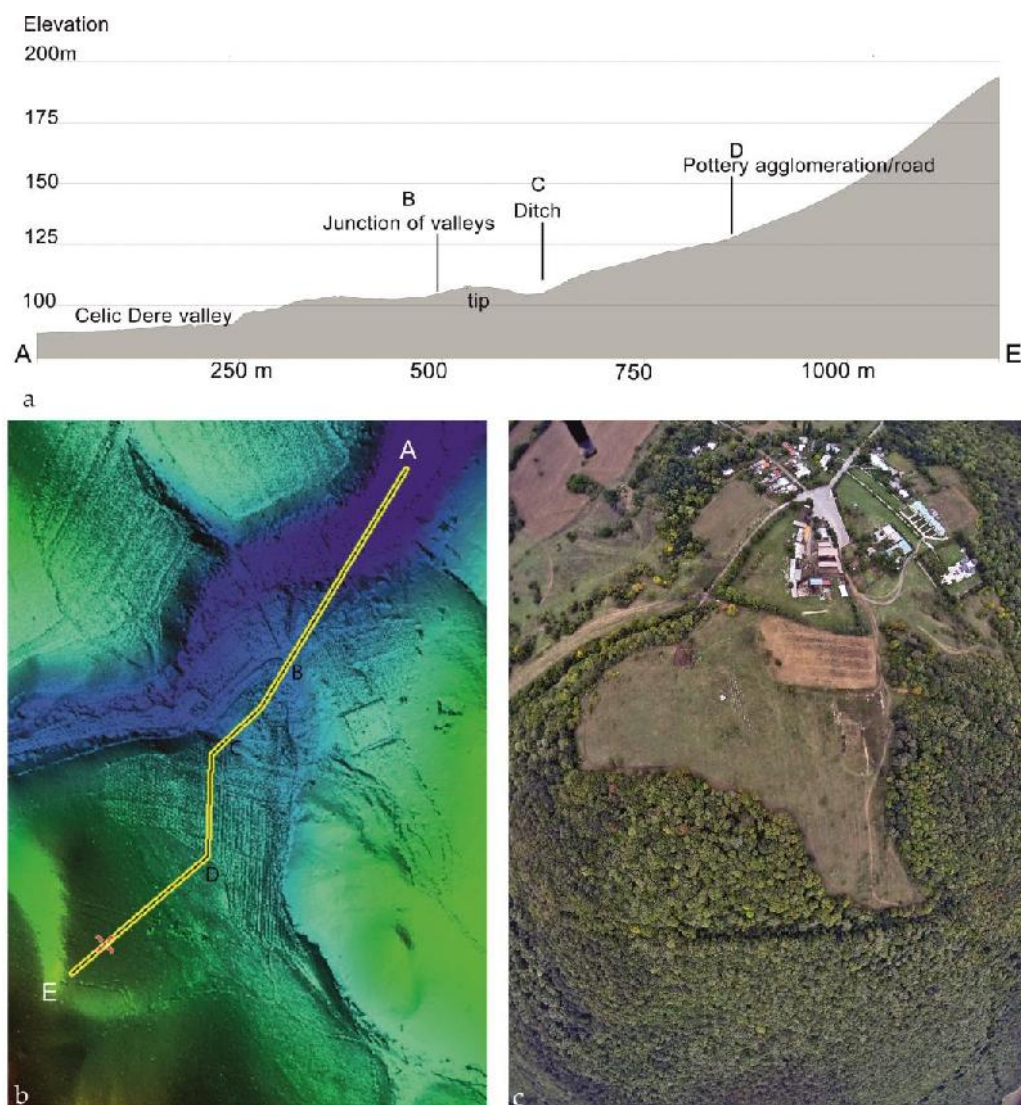


Fig. 10. Celic Dere Monastery/Cassiana site: a-b. altimetric profile on LiDAR data; c. aerial photography of the site (2013).

At Cassiana, too, the relief analysis based on elevation profiles (Fig. 10/a-b) supports the possibility of having a transversal semicircular ditch – separating along 180 m the apex of the promontory triangle (approximately 1.5 ha) from the rest of the wider

foothill. In the upper part, the observed depression has a maximum width of 12 m, and about 4 m at the bottom, with a depth of 20 to 60 cm (Fig. 11). In the site's eastern margin, the ditch is doubled towards north by a rampart (12 m wide, 60 cm high) currently overgrown with bushes. In its western sector, the ditch was widened in time by pluvial waters (C in Fig. 10/a-b).

The promontory's triangular apex is nowadays overlapped by a group of auxiliary buildings belonging to the Celic Dere Monastery (Fig. 6; Fig. 9/a; Fig. 10/c). Thus, between the junction of the two valleys in the northeast and the forest road in the south-southwest, the promontory (and probably the site itself) could have measured at least 10.5 ha (ca. 400 m northeast – southwest). The promontory's northern narrower end could be the 'plateau located near the Monastery preserving the vestiges of an open settlement of the Early Iron Age' mentioned by Simion in 1995, in an article assembling an archaeological repertory of Celic Dere area.⁶² It gives us ground to take into consideration the idea that some archaeological materials originated indeed from the promontory's apex, even if no excavations were ever made there. In the same paragraph he continues: 'and further, marked as an extension of the first, another plateau with an area of approx. 10 ha still retains the shape of ramparts that once fortified, in the 5th-3rd centuries BC, a Getae settlement or a fortress of refuge'. It seems logical to consider that the rest of the promontory rising gradually towards southwest, and where the archaeological materials published here were found, was this 'another plateau', 'an extension of the first'. Simion thought there were two different sites, without noticing the separating ditch. The morphologic analysis of the relief shows there is a single morphological unit shaped by two bodies of water and that a rampart/ditch line separated the tip of the triangle from the rest of the slope. The date of this fortification line is, of course, unknown.

Regarding the alleged ramparts mentioned by Simion, the analysis of the digital terrain models discloses several linear anomalies (Fig. 7-8) located to the west and south of the ditch discussed above. However, none allows certain identification as a defensive element, at least not in this stage of the research, but it will surely guide the investigations towards these hot spots, in the years to come.

The most obvious terrain marks visible on UAV DSM and the LIDAR DEM are the traces of an older terracing system – to be associated, as the Romanian Topographic Map made in the 1970s suggests (Fig. 9/a), with an orchard created sometime during Communist period, ca. 1960s. Currently, the orchard is deserted and has been so for the last three decades. Both the UAV DSM and the LiDAR DEM recorded the scale of this terracing system covering the entire open plateau, to the south and west of the ditch/rampart mentioned above. It is especially visible on the

⁶² Simion 2003a, 213; in Romanian in original.

eastern (sunnier and gentler) slope of Cassiana hill (Fig. 7). The terraces measure ca. 4 m wide and up to 0.7 m high, being organized in parallel lines, over 300 m long, outlined in a north – south direction (in the eastern part) and a northwest – southeast direction (in the western site sector), respectively. This significant terracing activity altered or removed the archaeological layers, bringing to the surface archaeological materials.

Depressed linear relief anomaly C in Fig. 7 appears also in the magnetic data (X9 in Fig. 14). It is almost certainly a road, later than the building of the terraces – which are cut by it – but earlier than the last decade, as it did not leave a grass mark to be recorded in the orthophotography. Similarly, E in Fig. 7 (also 5 in Fig. 6), a straight line, cutting the slope with no regard for a gentle follow-up of a relief elevation curve, is a road platform fitted in the modern times (thus not an old traditional road) in relation with the forest exploitation. Its outline is marked on the 1970s topographic map (D7 in Fig. 3/b).

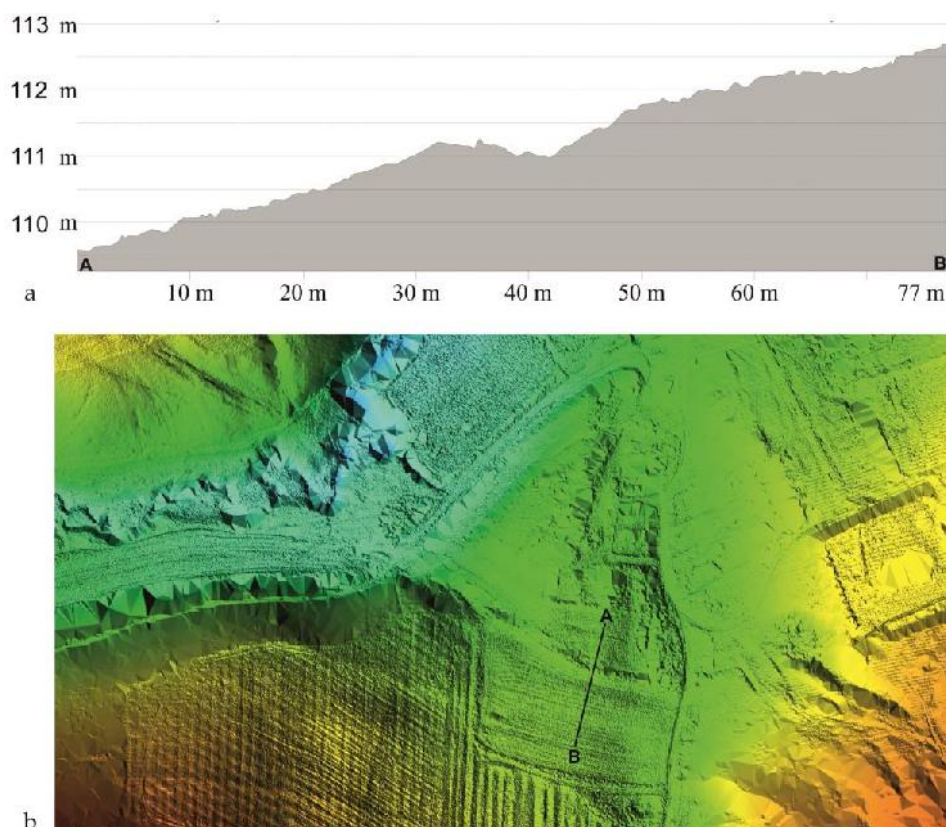


Fig. 11. Celic Dere Monastery/Cassiana: a-b altimetric profile on LiDAR data.

Anomalies B and D in Fig. 7 are harder to interpret strictly looking at LiDAR data, without additional geophysical surveys or even excavations. B is elevated above the ground and certainly older than the orchard terracing system. At this moment, however, it cannot be distinguished if it has a geologic origin or if it represents the trace of an older landmark related to agricultural lots existent before the 1960s.

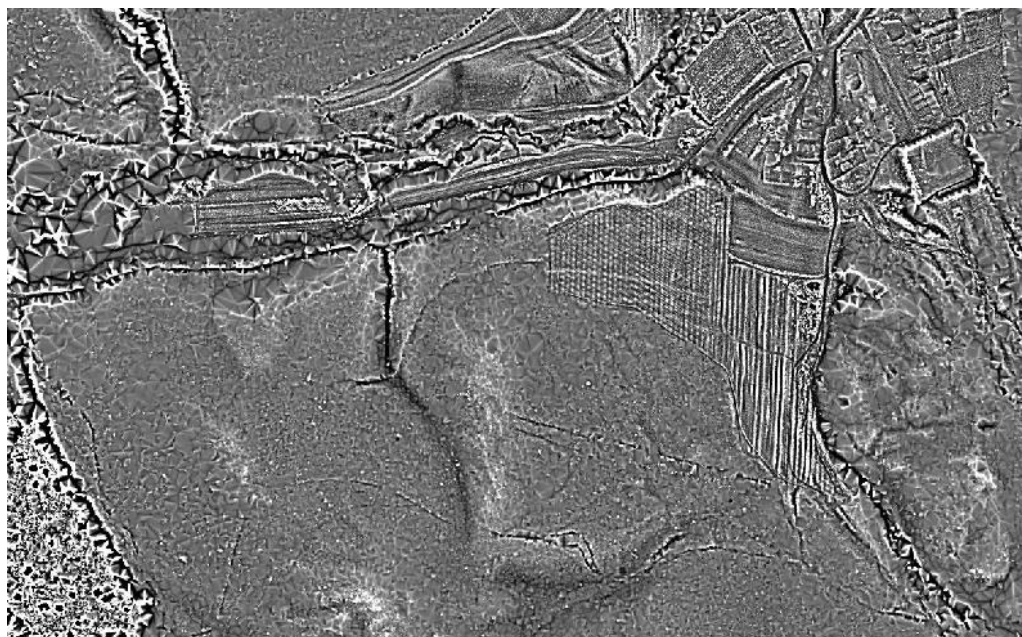


Fig. 12. Local Relief Model Lidar processing with Relief Visualization Toolbox.⁶³ This visualization procedure is suited for archaeological analysis as it enhances small local relief variations.

Similarly, for D, which is quite interesting as it is following the promontory's northern margin, parallel with the valley of Celic Dere as a continuation of the ditch/rampart separating the narrower apex, is not clear if it is an old forest limit marker or perhaps even an anthropic fortification line.

⁶³ Kokalj, Somrak 2019; Zakšek *et alii* 2011.

GEOPHYSICAL ANALYSIS. DENSITY AND CHARACTER OF MAGNETIC ANOMALIES

A surface of 1.9 ha, located in the southeastern sector of the promontory (Fig. 13), was investigated by geophysical means, namely with a magnetometer.⁶⁴ The measuring grid was developed parallel with the forest road alignment and comprised twelve 40 × 40 m squares which were traversed in zigzag, one meter between tracks. Along the tracks, measurements were automatically collected at 0.125 m interval. The recorded values were later interpolated in a uniform grid at 0.25 m (Fig. 14). The location of the surveyed area was selected according, first, to the density of surface archaeological material, and, secondly, constrained by the garbage dump area in the east (which would alter the magnetic measurements) and the forest in the west.



Fig. 13. Celic Dere Monastery/Cassiana site - the geophysical grid overlapped on the orthophotography which was textured on top of the hillshaded terrain model (DSM).

⁶⁴ The geophysical survey was carried out by Dan Ștefan with a Bartington Grad-601 fluxgate magnetometer. During the survey, a team of Polish archaeology students from the University of Rzeszow participated under the direction of Professor Tomasz Bochnak.

The purpose of the survey was to have an initial assessment of the site potential and to find out if the terracing activity had significantly destroyed the site or if any archaeological features were still to be found.

As expected, the obtained results revealed the heavy impact the modern activities, related either with agriculture (terracing for orchard) or with Monastery habitation (garbage, roads, fences), had on the archaeological site. The terracing system is clearly visible in the magnetic map, on the entire surveyed areal. The densely spaced excavated terraces exhibit two major orientations – corresponding with what was observed on the digital terrain models as well.

Also visible are the anomalies equivalent to the modern roads (including X8 in Fig. 15 – which is older than the terraces). Their strong magnetic fingerprint, as in the case of the orchard amenities, manifested as bipolar-like alignments, is indicative of the alteration of the archaeological layers, thus indirect proof of its initial existence. Numerous small bipolar signals (Fig. 15/e), clustered in large, irregular areas (X7a-c in Fig. 15) are primarily proof for the heavy contamination of the site with modern metallic waste. It is not to be excluded, considering the deep terracing, that part of these signals was related to fragmentary/destroyed burnt materials (fireplaces, burnt adobe).

Despite the destruction and garbage contamination, the magnetic survey still evidenced numerous magnetic anomalies (66 were mapped in Fig. 15/b), mostly circular or oval, distributed in the entire surveyed area. Their consistent magnetic signal, clear margins, and small dimensions (0.8-1.5 m diameter) are indicative for the presence of pits filled with magnetic materials or of fireplaces (Fig. 15/f-g).

The highest density of anomalies of archaeological potential appears to be in grid squares A1 and D2 (this last one corresponding also with the highest density of surface materials), but this distribution is influenced by the spoiling of grid squares in column 3 and E2 by modern garbage. Several of the observed anomalies have larger dimensions, like X2 and X1 in square D2 (2.5/3 m). In the southern two rows of the surveyed grid (D and E) two parallel slightly more magnetic than the surrounding soil matrix linear anomalies were observed. They measure 40 m long each being developed in north-east – south-west direction – along the elevation line marking the promontory's south-eastern margin. They do not correspond with terrain anomalies observable in the LIDAR analysis. Could they be fortification ditches? It remains to be seen in future investigations. The situation revealed by the magnetic prospection indicates a site that does not fit the description of 'refuge fortification'.⁶⁵ By contrast, the remains of human activity seem quite consistent.

⁶⁵ Simion 2003a, 214.

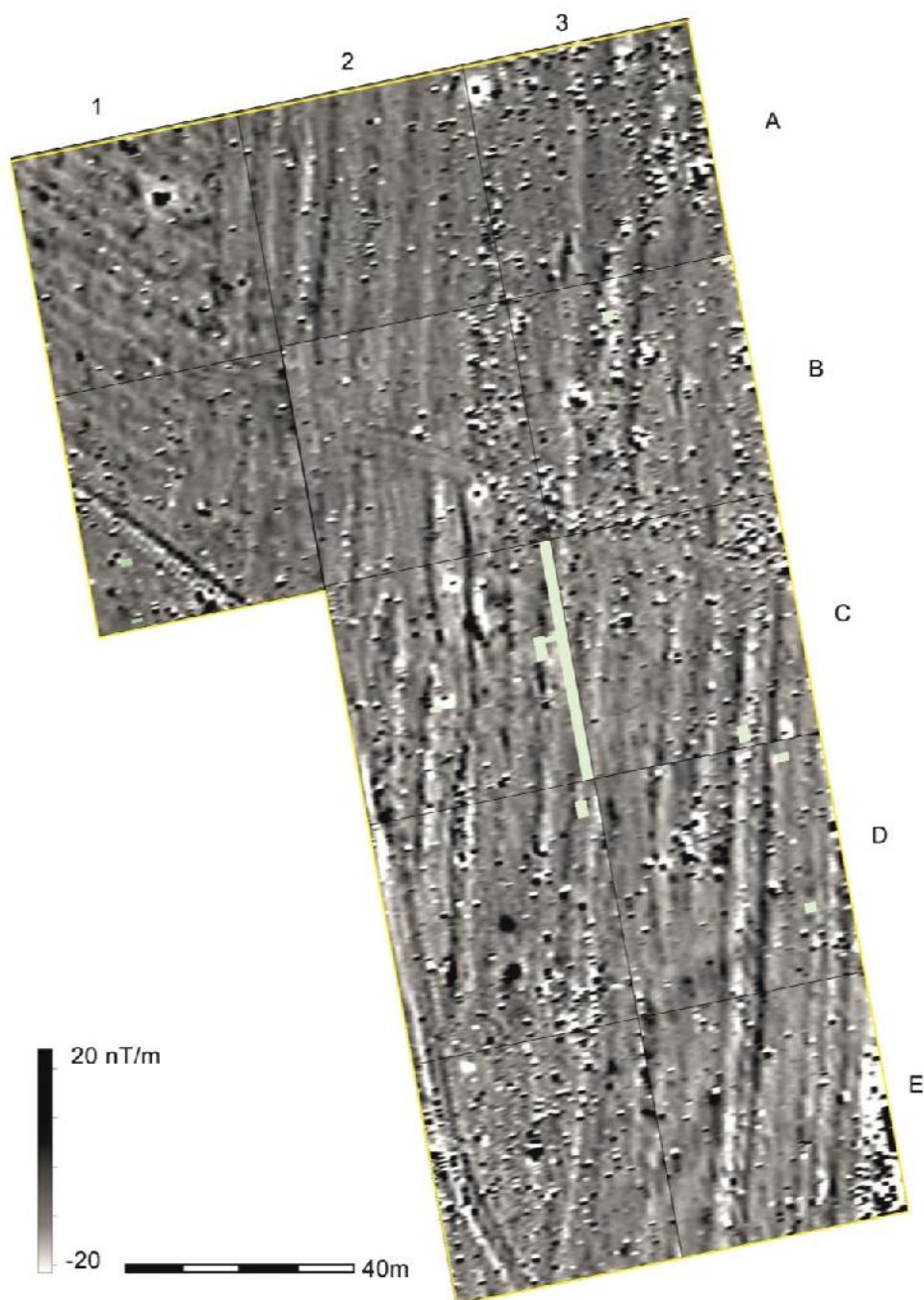


Fig. 14. Celic Dere Monastery/Cassiana site - magnetic map of the investigated area.

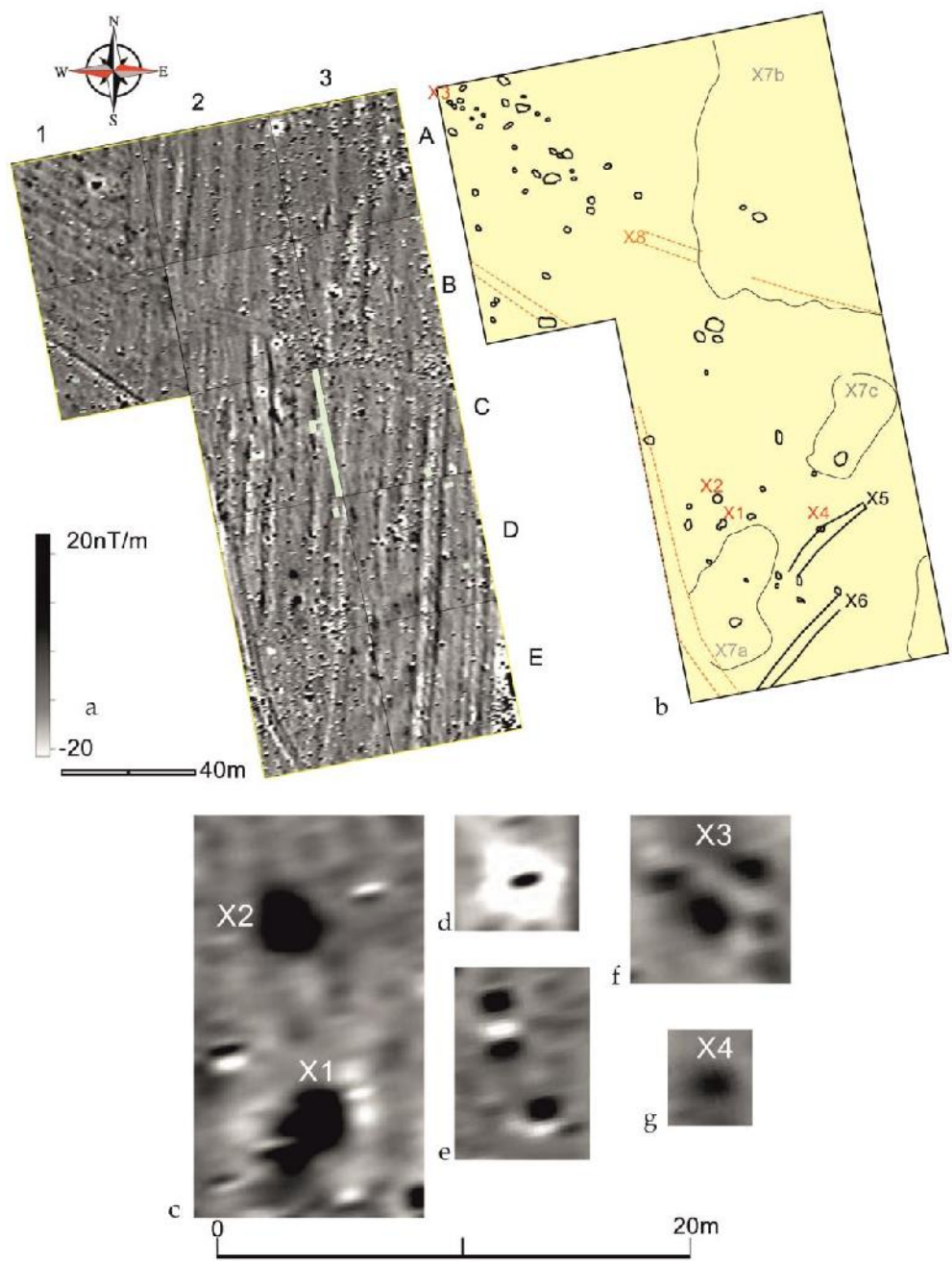


Fig. 15. Celic Dere Monastery/Cassiana site - interpretation of the magnetic survey.

TYPES AND CHRONOLOGY OF IDENTIFIED MATERIALS

Those site sectors that were not overlapped by the Monastery auxiliary buildings or by forest had been covered in thick grass vegetation for several decades after the orchard was abandoned. Moreover, the soil was at the time of the survey, typically for the Northern Dobruja, quite dry. Therefore, the visibility for a surface field observation was at minimum. Only the area comprised inside the geophysical grid was systematically surveyed by traversing it on parallel tracks, spaced at 2-3 m interval. The majority of the collected artefacts, of which only the most representative types have been illustrated here (Fig. 16-20), were identified along the forest road, especially in the western margin of geophysical squares C2 and D2. This road had been recently levelled and widened with machines, an activity which cut up to 30 cm deep through the archaeological layers.

The majority of materials observable on the site surface (in the forest road area) was the various parts of amphorae, many of which were preserved in sizeable fragments. The usual massiveness of their bottoms, necks and handles made these items more time resistant, comparatively with almost any other contemporaneous pottery. Many of the amphorae fragments carried visible recent cutting marks caused by machines. The elements that allow identification belong, in their majority, to the late 6th-5th centuries BC recipients made of fine, well fired, clay. The bulgy Chian necks marked with a red/orange painted line right under the lip were recognized in several instances (Fig. 16/2-3, 5). They fit types dated to the late 6th - first three quarters of the 5th century BC.⁶⁶ A short bottom with a frame-shaped stem (Fig. 16/8a-b) resembles late 5th century BC-early 4th century BC Mende.⁶⁷ The neck fragment covered in light-yellow slip and painted with an orange line at the base (Fig. 16/1a-b), could have belonged to a late 6th – early 5th c. BC recipient from Attica.⁶⁸

At Cassiana, several other amphorae fragments, found on surface, could be dated broadly within the 4th-3rd centuries BC. No stamps were found and the pieces available were quite fragmented (Fig. 17). Taking into consideration only the partial available morphology, the fabric and slip colour, they were paralleled with recipients made in Thasos (Fig. 17/2, 4, 9-10)⁶⁹, Chios (Fig. 17/4-5, 8), Heraclea Pontica (Fig. 17/1), Knidos? (Fig. 17/7) and Rhodos (Fig. 17/3).

The chronological interval comprised between the last quarter of the 6th c. BC and middle 3rd century BC, with the highest activity along with the 5th century BC, is well

⁶⁶ Монахов 2003, 234-237, fig. 4/4; 5/3; 7/2).

⁶⁷ Монахов 2003, 292, fig. 63/2; 65/5).

⁶⁸ According to Iulian Bîrzescu ("Vasile Pârvan" Institute of Archaeology, Bucharest) who assisted Celic Dere team in the initial evaluation of the Greek pottery.

⁶⁹ Монахов 2003, 274, 278-279, fig. 44/5; 48/3; 49.

represented in both in the settlement and necropolis located upstream on Celic Dere valley. Fragments of late Archaic - early Classical amphorae were discovered during 2013-2015, in trench SXVII excavated by the authors under the direction of Valeriu Sîrbu in the settlement⁷⁰, especially as mixed debris in the filling of pits belonging to the latest level of site use (dated loosely to the 4th century BC – middle 3rd century BC). They come mainly from Chian and Lesbian recipients, but also a handle fragment of Clazomene and the foot of an Attic black-glazed *kylix* were found in pit C2. A neck with handles from Chios (short, plump swollen neck, decorative stripe along with the handles), probably from the third quarter of the 6th century – early 5th century BC⁷¹ was published by Simion⁷² as coming from the settlement. Also, from Simion's excavations originates a Late Corinthian cothon vase (second half of the 6th century BC).⁷³

Of particular interest are the several fragments of quality wheel-made grey (monochrome) tableware found at Cassiana (Fig. 17). Even if preserved in small sizes, not allowing the complete restoration of the vessels' profiles, they disclose, still, a great variety in the treatment of mouth rims, grooving decoration and, thus, of shape subtype. The fabric is fine or very fine, contains mica or crushed pottery, is well fired, grey to steel grey, covered in a thin slip – grey or dark-brown. Most of the fragments come from large open shapes – plate/bowls. The first group of fragments bear incurved rims, outlining diameters ranging between 19 and 32 cm. Of these, some rims are round in profile (Fig. 18/9-10, others thickened towards the interior (Fig. 18/11-13), bevelled (Fig. 18/5) or grooved (Fig. 18/8). The second group of plates/bowls is characterized by horizontal (Fig. 18/1-2) or everted rims (Fig. 18/3 – this item could be a *lekanis*), ca. 28 cm diameter.

The plates/bowls are either plain or decorated with singular or bands/groups of parallel incised lines – right under the lips or/and on the mouth curve. In cases, the deeper and wider incisions resemble grooves (Fig. 18/14-15). Good analogies for the finds, taken as a set, including the cup or *kantharos* (Fig. 18/16), come from Apollonia Pontica, from contexts dated to the 6th c. BC, starting with the second quarter.⁷⁴

⁷⁰ Sîrbu *et alii* 2016.

⁷¹ Монахов 2003, 16-18, fig. 3/5-6; 4 – group IIIA.

⁷² Simion 2003a, 234, fig. 10/a.

⁷³ Mănucu-Adameşteanu 1996, 40, 46, fig. 3/5.

⁷⁴ Nikov 2012, fig. 1/3-4; 3; 8/5-6; 9/17; 11/3; 20/8-9; 21/6; 30/1.

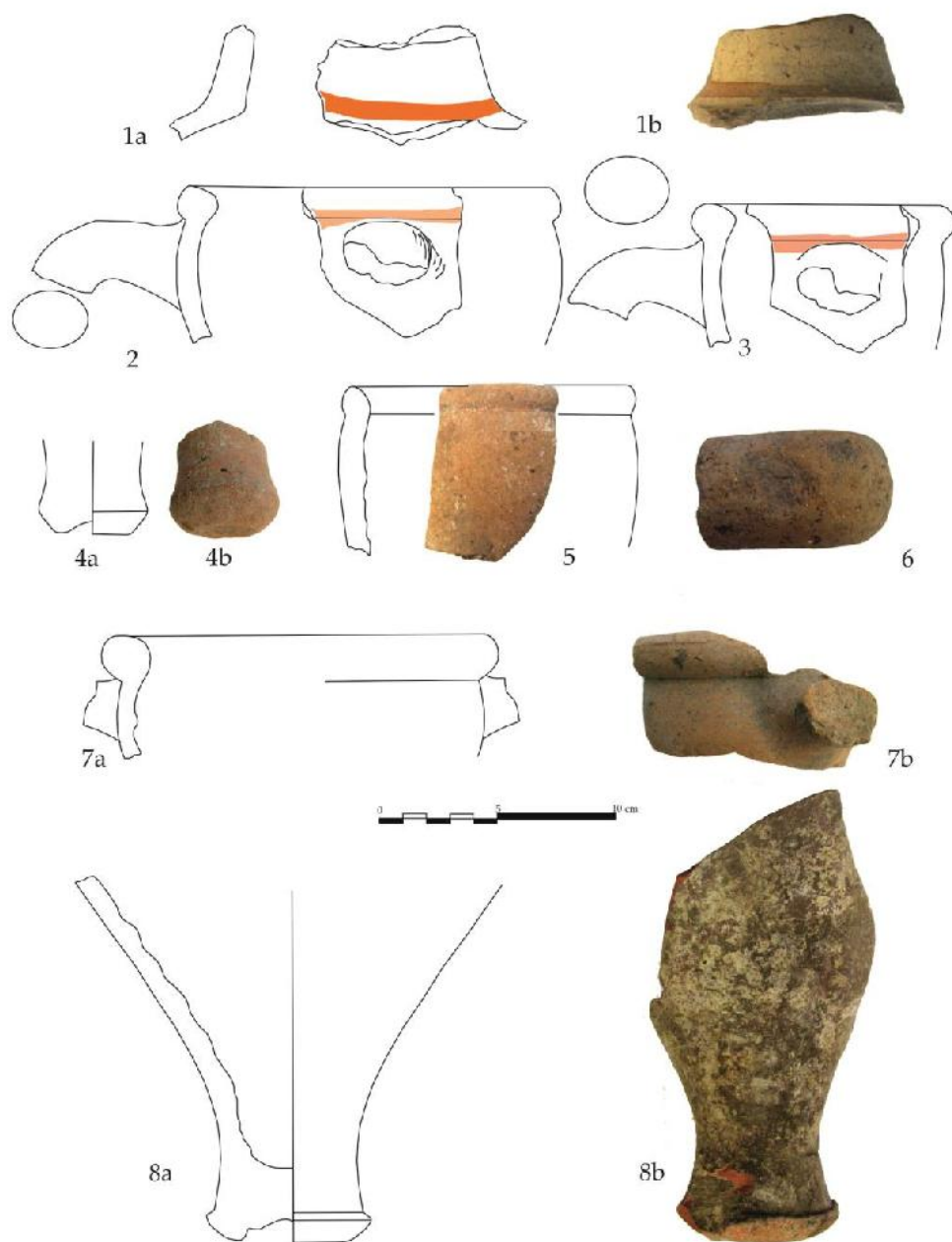


Fig. 16. The 6th-5th c. BC amphorae fragments discovered at Celic Dere Monastery/Cassiana site (surface survey).

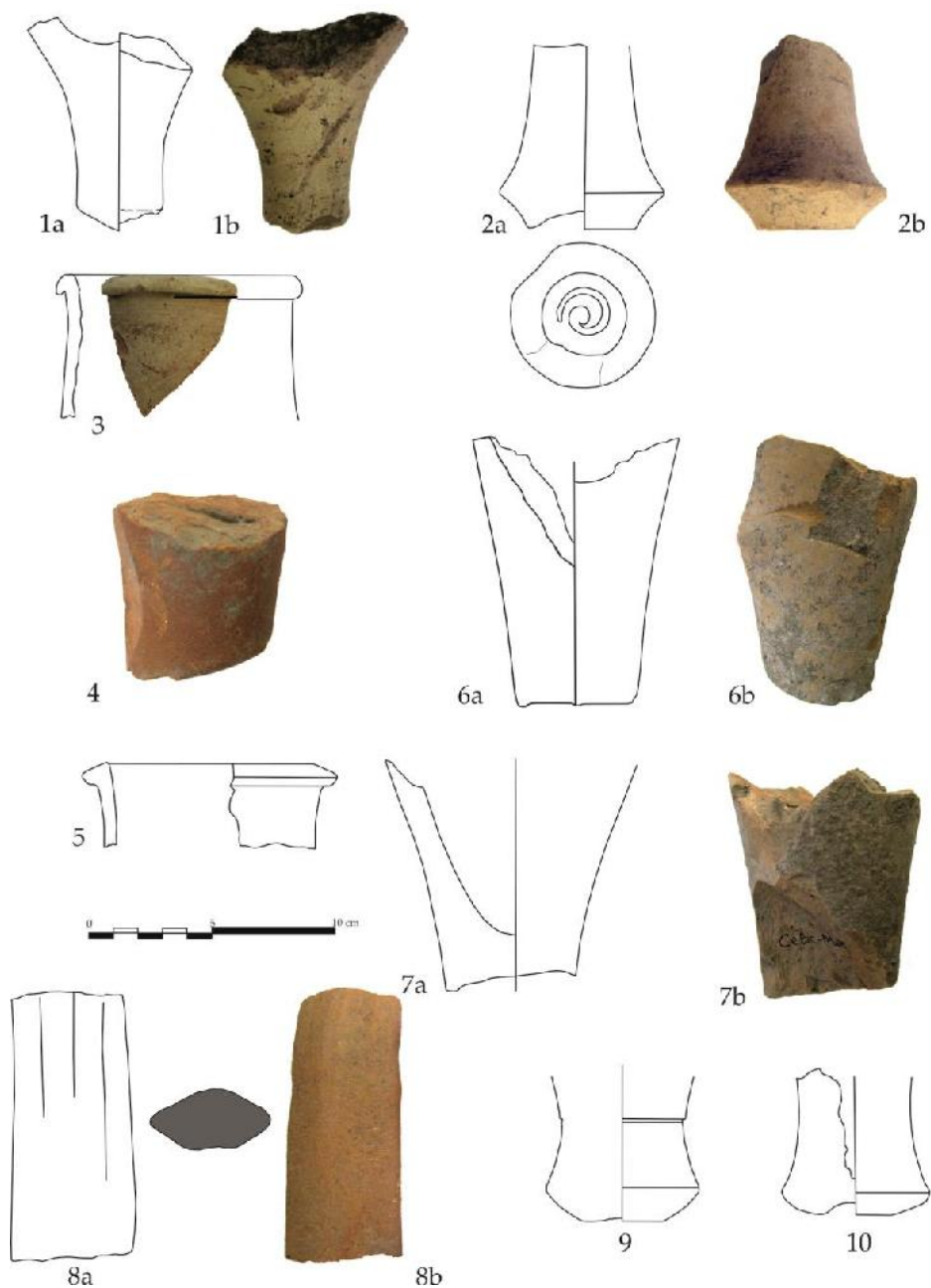


Fig. 17. The 4th-3rd century BC amphorae found at Celic Dere Monastery/Cassiana site (surface survey).

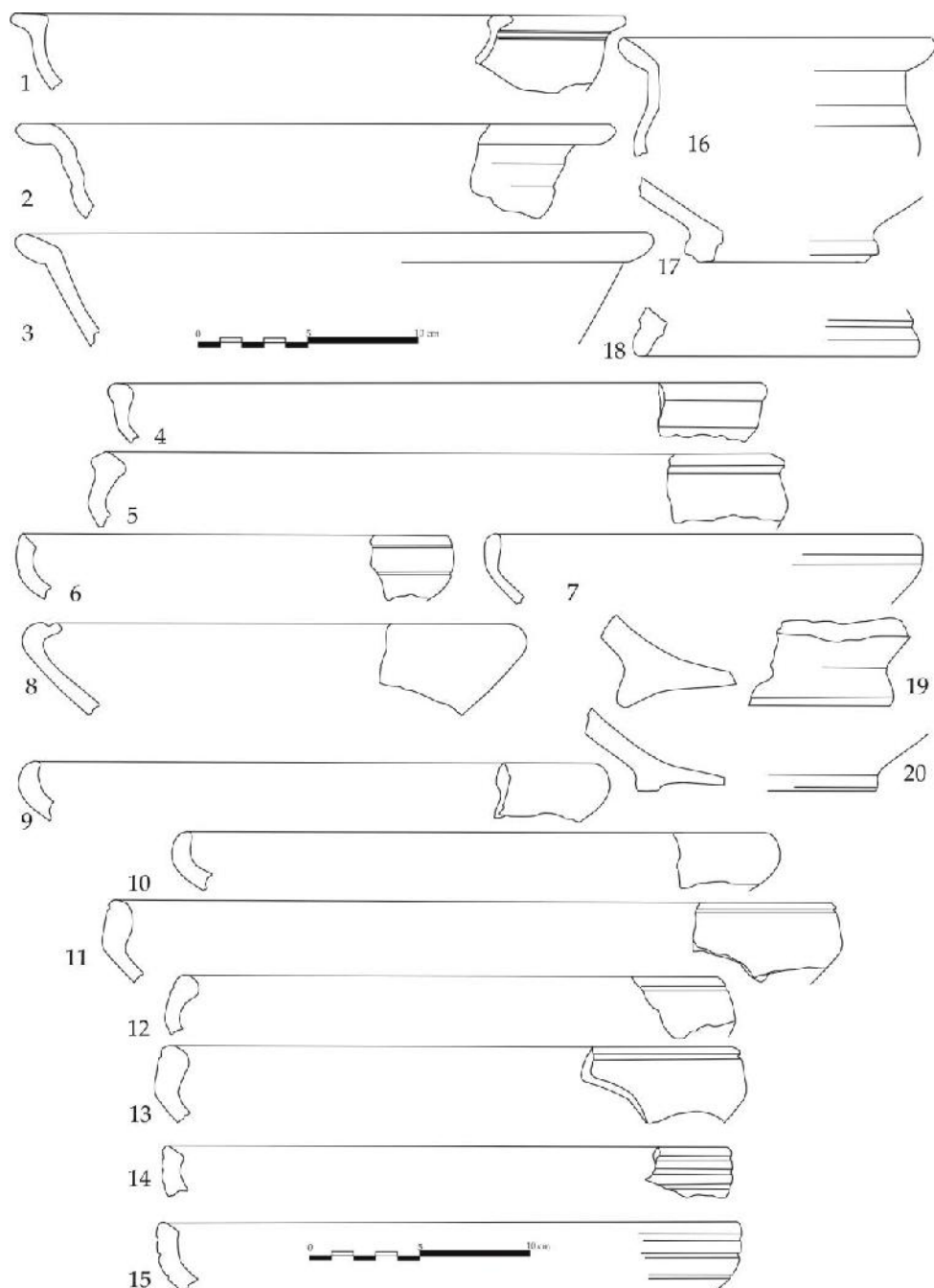


Fig. 18. Wheel-made grey (monochrome) ware (6th-5th c. BC).



Fig. 19. Hand-made pottery fragments identified on the surface of Celic Dere Monastery/Cassiana site (surface survey).

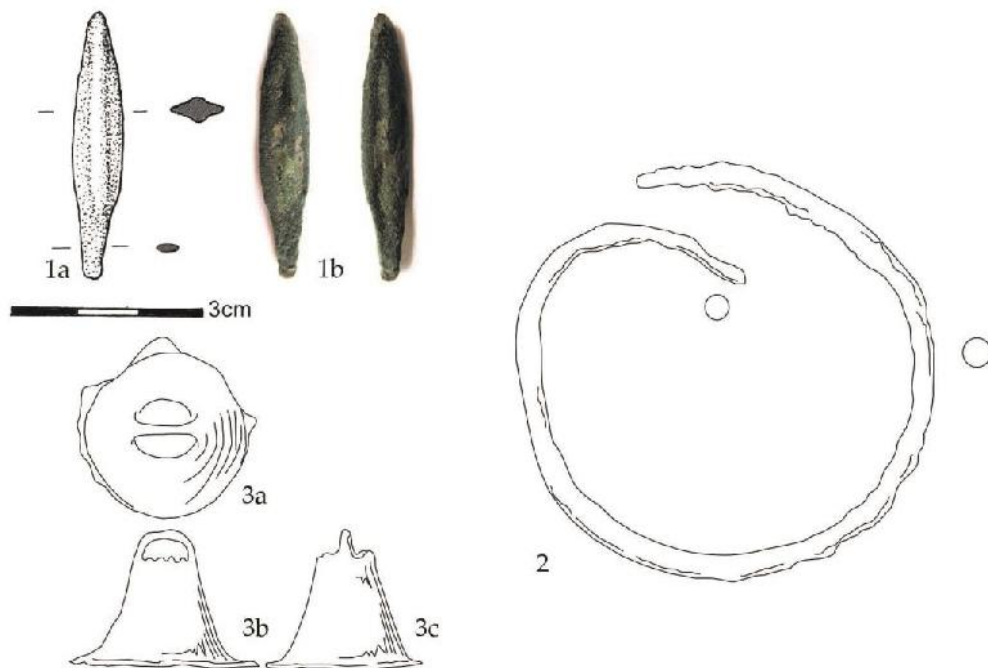


Fig. 20. Metallic small-finds identified on the surface of Celic Dere Monastery/Cassiana site (surface survey): 1, 3. bronze; 2. iron.

To the 6th-5th centuries BC were assigned also the incurved rim bowls with grooved rims from Beidaud, found in association with Chian amphorae.⁷⁵ Variants of these open shapes, especially the smaller and deeper ones, have analogies until the 4th-3rd centuries BC in sites like Zimnicea.⁷⁶

A significant percentage of the found fragments in the surface survey at Cassiana originated from hand-made vessels of coarse clay - storage or cooking jars with straight walls (Fig. 19/3-7, 9) or slightly everted mouths (Fig. 19/1), fitted with grabbing handles (horizontal, conical orientated upwards or just decorative) and decorated with plastic bands of alveoli. Other fragments belonged to cups/jugs (Fig. 19/2, 19) or conical bowls (Fig. 19/8). The material is typical, in large, for the Late Iron Age sites in Thrace.

⁷⁵ Simion 2003a, 97, fig. 11/3, 7-8.

⁷⁶ Alexandrescu 1980, 87-88, fig. 33-34

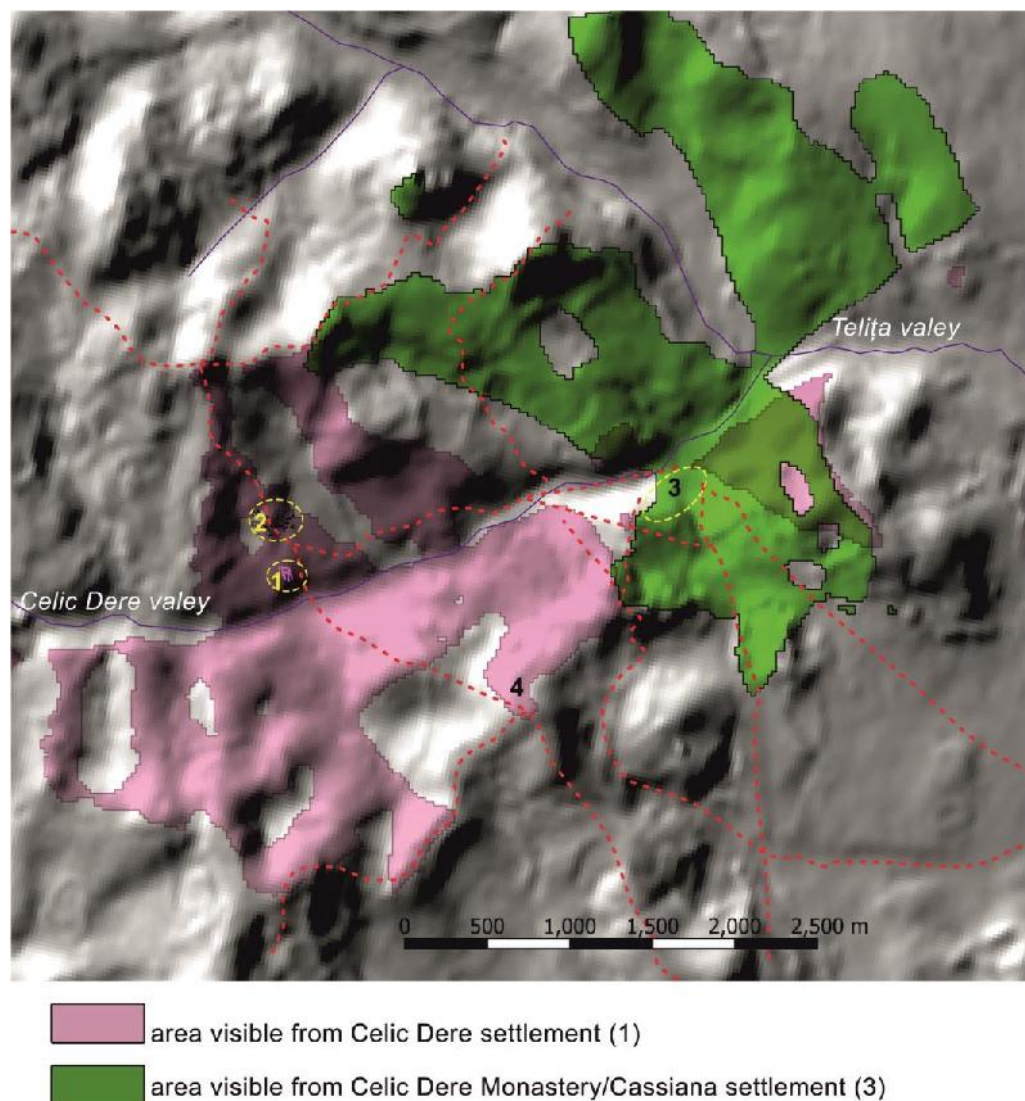


Fig. 21. Visibility analysis on EU-DEM data for the two settlements on Celic Dere valley (10 km range): 1. Celic Dere settlement; 2. Celic Dere necropolis; 3. Cassiana; 4. Edirlen.

In 2013, during the first round of surveying, a bronze leaf-shaped arrowhead monetary sign (Fig. 20/1) was found in the grass, right to the north of the geophysical grid. It has a thin, elongated shape, with rounded, never-sharpened edges and median rib visible on both faces. This type can be dated during the second half of the 6th

century BC.⁷⁷ Numerous arrowheads monetary signs were found in the Archaic pits at Tariverde.⁷⁸ A hoard of 698 monetary signs was recovered from Vișina, a site of the same character on the shores of Lake Golovița and another large one from Nuntași II.⁷⁹

A casted bronze bell with a wide thinned base and semicircular loop on top (Fig. 20/3a-c) was found on the surface around the forest road – approximately in square B1 of the magnetic grid. The object has exact analogies in the inventory of two cremation graves found in the neighbouring tumulus at Telița⁸⁰ dated back to the beginning of the 3rd century BC. Similar finds are known at Enisala⁸¹ and Sarichioi.⁸² A bronze bell of the same type was found in Tumulus XXVI at Istros, dated within 200-180 BC.⁸³

The bracelet (Fig. 20/2) made of an iron bar, circular in section, has bent and overlapped ends. Similar instances are more common mostly in bronze for the Late Hallstatt – Late Iron Age period⁸⁴, but some were also made of iron.⁸⁵

INSTEAD OF CONCLUSIONS: OPENING NEW RESEARCH POSSIBILITIES

The non-invasive survey undertaken in 2013 and 2014, west of Celic Dere Monastery in the place baptized ‘Cassiana’, has revealed the existence, at the mouth of Celic Dere river, in northern Dobruja, of a large settlement belonging to the late 6th-3rd centuries BC.

The spatial analysis indicated that the site had as certain elements of fortification a ditch and rampart delimiting the narrowest part of the terrace, elevated above the intersection of two streams. Even if their date is not yet clarified in relation with the Late Hallstatt – Late Iron Age artefacts found on surface in the higher part of the slope, the earthworks still represent clues for the archaeological area’s large size. Several other LiDAR anomalies, of a less certain nature, allow the advancing of hypotheses regarding the existence of potential more complex enclosing system, similar in shape to what is known in Beidaud and Beștepe, but only future excavations will clarify.

The geophysical survey evidenced numerous anomalies resembling the typical magnetic fingerprint of pits, fireplaces, or ditches, in a density sufficiently high to rule out the site’s interpretation as refuge fortification. The promising results recommend

⁷⁷ Earlier type according to Talmațchi 2013, 310, fig. 1/1-11.

⁷⁸ Vulpe 1954, 104-105, Fig. 26/3-4; Vulpe 1955, 546, 18/2-4.

⁷⁹ Talmațchi 2010, 69-73.

⁸⁰ Simion, Cantacuzino 1962, fig. 5/15, 19-20.

⁸¹ Simion 1971, Fig. 13/7.

⁸² Oberländer-Târnoveanu, Oberländer-Târnoveanu 1980, 139, pl. 36/5.

⁸³ Alexandrescu 1966, 525, pl. 93 XXVI/27.

⁸⁴ Enisala (Simion 1971, fig. 14), Huși (Arnăut 2003, 226, fig. 39/B.).

⁸⁵ Hanska-Pidașcă (Măndescu 2010, pl. 140/40).

an enlargement of the geophysically investigated area, even if the troubling debris contamination due to modern waste deposited in the Monastery's vicinity will challenge the choice of future involved methods.

The found material, even if just collected from site surface, is rich and representative, evidencing the past communities' unrestricted access, as early as the end of the Archaic period, to Greek markets. Taking into consideration the chronology and types of these items, both in Cassiana and in its sister settlement on Celic Dere valley (located just 2.5 km to the west), especially for the late 6th-5th centuries BC, the two sites reveal themselves as completely relatable to the group of emergent settlements in the Istrian territory in which indigenous material occurs for the first time after the end of Babadag culture sites. A chronological advance of two or three decades can be noticed for some of the sites close to Istros (Nuntași II, Tariverde), but we should not rule out that the difference may refer rather to the date of accessing fine imports (and thus narrowly datable material) and not necessary to the general date of commencing activities. This overall phenomenon of indigenous revival, observed, in fact, by Simion⁸⁶ as well, challenges the hypothesis of purely Greek instalments in the Istrian territory, or even their occurrence as a result of a unilateral colonial intent. The hypothesis that many of these new settlements had started and gravitated around sanctuary-like places of the 1st millennium BC types needs further exploration. However, many supporting arguments can be already noticed – the prevalence of pit assemblages, the occurrence of dog and human skeletons, of entire vessels, figurines, statuettes or even the monetary signs deposits, the time endurance of ritual practice in same sites, the connection with springs.

After the middle of the 6th century BC, or rather towards the end of the century and at the beginning of the 5th century BC, activity can be attested in new sites of non-funerary character not only in Dobruja, where traditional views tend to explain the process as a direct result of colonial activity, but in a larger area of North Danube Thrace, including at the foothills of the Carpathians. Starting with this period, in Ferigile III environment we notice, in the context of an archaeological group previously known exclusively from funerary finds, the occurrence of the first settlements. Quite remarkable seems the Ferigile III settlement at Budureasca-Vadu Săpat⁸⁷ (Prahova county) where there were found a Samian amphora, a bone psalia with zoomorphic finials and a monetary sign of the arrowhead type⁸⁸ – a combination which points to a clear synchronism with the Celic Dere-Tariverde environment. Some

⁸⁶ Simion 2003a, 176, 179.

⁸⁷ Măndescu 2010, 196.

⁸⁸ Talmațchi 2010, 69-70.

isolated sites appear also closer to the Danube like in Ocnele Mari Cărpiniș⁸⁹ (Vâlcea county) or Alexandria-Vii⁹⁰ (Teleorman county). The complex of finds at Alexandria is also remarkably similar to Celic Dere: wheel-made grey monochrome vessels, especially table amphora imitations, associated with Glasinac type fibulae and hand-made pottery and fragments of portable fireplaces (found in three large pits interpreted as dugouts). Worth mentioning is also the ritual nature of Ocnele Mari context (deposit of entire vessels (Ferigile III) with fragments of a portable fireplace).

Nevertheless, while the actual Greek founding of settlements inland starting with the 6th century BC seems for us now less definite and anyhow not unilateral, the effect of the colonists' presence at the Lower Danube as generator and enhancer of social aggregation inside local communities by facilitating access to political and economic capital cannot be denied. In a similar key can be interpreted the supra-regional system of alliances instated on the occasion of the Persian-Scythian confrontation at the end of the 6th century BC which facilitated social cohesion and elite contacts.

At Celic Dere, the association of two contemporaneous settlements, one accompanied by a large necropolis, located in less than 3 km proximity, their large sizes as evidenced by geophysical prospection and terrain analysis, stand proof for the consistent demography of the local community throughout the late Archaic and Classical periods. The two settlements on Celic Dere have complementary visual control on the valley (Fig. 21) and exploit efficiently the relief advantages for communication and transport. If to these we add also the isolated funerary discoveries (contemporaneous with various phases of the cemetery in Celic Dere) from Telița⁹¹, Poșta⁹² and Piatra Frecăței⁹³, the agglomeration of sites in such a compact area is even more obvious and can be taken as indicative for a nuclear social organisation. The proximity to a major Danube ford and land route linking northern steppes with the ancient littoral may explain this community's success. Functioning most probably since prehistoric times, the communication corridor was the most suited to link, on land, Istros and Orgame with the other Milesian colonies on Tyras, Olbia and Panticapaeum. A pair-like agglomeration of sites occupies the other bank of the Danube around the same ford (Novoselskoe⁹⁴, Orlovka⁹⁵, Giurgiulești⁹⁶). The

⁸⁹ Petre, Vulpe 1983, 138-140, fig. 7, 8/1-2.

⁹⁰ Preda 1959; Preda 1960.

⁹¹ Simion, Cantacuzino 1962.

⁹² Lăzurcă, Simion 2000.

⁹³ Simion 1976, 144-145, fig. 1; 2/1-3.

⁹⁴ Vanchugov *et alii* 1999a.

⁹⁵ Vanchugov *et alii* 1999b.

⁹⁶ Arnăut 1999.

particular road segment on which the two settlements on Celic Dere valley were located should be considered, in fact, part of the major corridor that Darius might have used in the Scythian expedition, at the end of the 6th century BC.

Characteristic for the group of settlements of the late Archaic period in Northern Dobruja, like Tichilești⁹⁷ and Celic Dere area or Beidaud⁹⁸ is that they occupy the same places or vicinities already used during the Babadag culture. A particularity is also the frequent association with funerary areas with a prevalence of inhumation.

Future explorations in Cassiana and the publication of Gavrilă Simion's excavations in the Celic Dere settlement will surely allow in the future more grounded observations and analyses, and the testing of the advanced hypotheses.

BIBLIOGRAPHY

- Ailincăi, S.C. 2010, *New observations on the First Iron Age Discoveries at Revărsarea–Cotul Tichilești, Isaccea, Tulcea County*, in Bolohan, N., Mățău, Fl., Tencariu, F. (eds.), *Signa Praehistorica. Studia in honorem magistri Attila László septuagento anno*, Iași, 351-379.
- Ailincăi, S.C. 2013, *Începuturile epocii fierului în Dobrogea*, *Studii și Cercetări de Istorie Veche și Arheologie* 64 (3-4), 223-292.
- Ailincăi, S.C. 2016, *Before the Greeks. The Early Iron Age in Dobrudja*, in Gogâltan, F., Cordoș, C. (eds.), *Prehistoric Settlements: Social, Economic and Cultural Aspects. Seven Studies in the Carpathian area*, Cluj-Napoca, 201-236.
- Ailincăi, S.C. 2020, *Cercetările arheologice de la Beidaud – Calebair, jud. Tulcea (1976-1977, 1979-1980). Așezarea de la începutul epocii fierului*, in Aparaschivei, D., Bilavsch, G., Pîrnău, L. (eds.), *Varia Archaeologica (I). Tradiție și inovație în cercetarea arheologică din România și Republica Moldova*, Cluj-Napoca, 101-131.
- Ailincăi, S.C., Adamescu, A., Mihail, F., Micu, C., Țârlea, A., Stănică A.-D. 2019, *Despre locuirile umane de la începutul mileniului I a.Chr. în zona lacului Babadag*, in Zanoci, A., Băț, M. (eds.), *Contribuții la preistoria și istoria antică a spațiului carpato-danubian-pontic. In honorem professoris Ion Niculiță natalia sua octogesima celebrantis*, Chișinău, 163-185.
- Alexandrescu, A.D. 1980, *La nécropole Gête de Zimnicea. Dacia. Revue d'Archéologie et d'Histoire Ancienne, Nouvelle Série* 24, 19-126.
- Alexandrescu, P. 1966, *Necropola tumulară. Săpături 1955-1961*, in *Histria* 2, București, 134-294.

⁹⁷ Simion 2003a, 99-114; Baumann 1995, 228-268.

⁹⁸ Simion, Lăzurcă 1980; Ailincăi 2020.

- Arnăuț, T. 1999, *Necropola getică de la Giurgiulești*, in Arnăuț, T., Zancoci, A., Matveev, S. (eds.), *Studia in honorem Ion Niculiță*, Chișinău, 135-145.
- Arnăuț, T. 2003, *Vestigii ale sec. VII-III a. Chr. în spațiul de la răsărit de Carpați*, Chișinău.
- Avram, Al. 1996, *Modes de contacts entre Grecs et Gètes à Histria à l'époque archaïque*, in *Sur les traces des Argonautes. Actes du 6e symposium de Vani (Colchide)*, 22-29 septembre 1990, Besançon, Université de Franche-Comté, 241-252.
- Avram, Al. 2006, *The Territories of Istros and Kallatis*, in Guldager Bilde, P., Stolba, V.F. (eds.), *Surveying the Greek Chora. Black Sea Region in a Comparative Perspective*, Black Sea Studies 4, Aarhus, 59-80.
- Avram, Al., Bounegru, O., Chiriac, C. 1985, *Cercetări periegetice în teritoriul Histriei (I)*. Pontica 18, 113-124.
- Baralis A., Lungu, V., Dupont, P., Bastide, M., Bony, G., Caraire, G., Comfort, R., Delfieu, R., Guy, M., Jubeau, T., Kaniewski, D., Lebouteiller, P., Marinova-Wolff, E., Montagne-Perruchon, B., Morhange, C., Musat-Streinu, A., Popova, Tz., Petrescu, M., Rossignol, I., Slavova, I., Streinu, M., Sternberg, M. 2017, *L'établissement d'Acic-Suat (commune de Baia, Département de Tulcea). Méthodologie d'une enquête pluridisciplinaire*, Pontica 50, 455-488.
- Baumann, V.H. 1995, *Așezări rurale antice în zona Gurilor Dunării. Contribuții arheologice la cunoașterea habitatului natural (sec. I-IV p. Chr.)*, Biblioteca Istro-Pontica. Seria Arheologie 1, Tulcea.
- Berciu, D., Preda, C. 1959, *Sectorul Tariverde*, in Pippidi, D.M. & collaborators, *Raport asupra activității șantierului Histria*, Materiale și Cercetări Arheologice 5, 318-323.
- Berciu, D., Preda, C. 1961, *Săpăturile de la Tariverde*, Materiale și Cercetări Arheologice 7, 273-281.
- Bîrzescu, I. 2012, *Die archaische Siedlung von Tariverde*, Dacia. Revue d'Archéologie et d'Histoire Ancienne, Nouvelle Série 56, 77-90.
- Bozkova, A. 2016, *Pits of the First Millennium B.C. in Thrace, Sine Ira Et Studio*, in Bačvarov, K., Gleser, R. (eds.), *Southeast Europe and Anatolia in prehistory. Essays in honor of Vassil Nikolov on his 65th anniversary*, Bonn, 475-483.
- Dimitriu, S. 1972, *Discuții despre orașele pontice și teritoriile lor în perioada arhaică, pe marginea unor studii recente*, Studii și Cercetări de Istorie Veche 23, 111-120.
- Domăneanțu, C. 1993, *Un sanctuaire hellénistique du site de Nuntași II (comm. d'Istria, dép. de Constanța)*, Dacia. Revue d'Archéologie et d'Histoire Ancienne, Nouvelle Série 37, 59-78.
- Georgieva, R. 2015, *Ritual Pits*, in Valeva, J., Nankov, E., Graninger, D. (eds.), *A Companion to Ancient Thrace*, John Wiley & Sons, 144-172.

- Irimia, M. 1975, *Observații privind arheologia secolelor VII-V î. e. n. în Dobrogea*. Pontica 8, 89-114.
- Jugănar, G., 2003, *Inventarul arheologic al așezării de tip Babadag de la Telița-Amza. Campania 2000*, Peuce, Serie Nouă, 91-112.
- Kokalj, Ž., Somrak, M. 2019, *Why Not a Single Image? Combining Visualizations to Facilitate Fieldwork and On-Screen Mapping*, Remote Sensing 11(7), 747.
- Lăzurcă, E., Simion, G. 2000, *Une tombe a enclos circulaire sur la vallée de Telița*, in *Tombes tumulaires de l'Âge du Fer dans le Sud-est de l'Europe*, Actes du IIe Colloque International d'Archéologie Funéraire, Tulcea, Brăila, Călărași, Slobozia, 18-24 Septembre 1995, 83-88.
- Măndescu, D. 2010, *Cronologia perioadei timpurii a celei de-a doua epoci a fierului (sec. V-III a. Chr.) între Carpați, Nistru și Balcani*, Brăila.
- Mănucu-Adameșteanu, M. 1980, *Cercetările din așezarea antică de la Vișina, com. Jurilovca, jud. Tulcea*, Materiale și Cercetări Arheologice 14, 157-160.
- Mănucu-Adameșteanu, M. 1983, *Cercetările din așezarea antică de la Vișina, com. Jurilovca, jud. Tulcea (secolele VI-V î.e.n.)*, Materiale și Cercetări Arheologice 15, 174-177.
- Mănucu-Adameșteanu, M. 1996, *Câteva piese corinthiene din colecția Muzeului de Arheologie al ICEM-Tulcea*, Peuce 12, 39-46.
- Mănucu-Adameșteanu, M., Mănucu-Adameșteanu, Gh. 1992, *Așezarea de la Vișina, jud. Tulcea*, Materiale și Cercetări Arheologice 17, 205-216.
- Nikov, K. 2012, *Grey Monochrome Pottery from Apollonia Pontica. On Its Origin and Initial Distribution (Late 7th – 6th century BC)*, Veliko Tynovo.
- Oberländer-Târnoveanu, I., Oberländer-Târnoveanu, E. 1980, *Aspecte ale civilizației geto-dacice din Dobrogea în lumina cercetărilor din așezarea de la Sarichioi (sec. IV-II î. e. n.)*, Peuce 8, 88-142.
- Petre Gh., Vulpe A. 1983, *Der hallstattzeitliche Depotfund von Bistrița, Jud. Vâlcea, Rumänien*, Praehistorische Zeitschrift 58 (1), 127-140.
- Preda, C. 1959, *New aspect of early Latène epoch in Dacia discovered at Alexandria, Dacia*. Révue d'Archéologie et d'Histoire Ancienne, Nouvelle Série 3, 179-194.
- Preda, C., 1960, *Un nou aspect al începuturilor epocii Latène în Dacia (descoperirea de la Alexandria)*, Studii și Cercetări de Istorie Veche 11 (1), 25-38.
- Preda, C. 1972, *Tariverde – așezare băștinașă sau factorie histriană?* Pontica 5, 77-88.
- Sideris, A., Tonkova, M., 2019, *Pottery of the Classical Period from Halka Bunar, Central Southern Bulgaria*, in Manakidou, E., Avramidou, A. (eds), *Classical Pottery from the Northern Aegean and its Periphery (480-323/300 BC)*, Thessaloniki, 57-77.

- Simion, G. 1971, *Despre cultura geto-dacă din nordul Dobrogei în lumina descoperirilor de la Enisala*, Peuce 2, 63-129.
- Simion, G. 1976, *Les Gètes de la Dobroudja Septentrionale du VI^e au I^{er} siècle av. n.è.*, Thraco-Dacica 1, 143-163.
- Simion, G. 1992, *Geții și sciții dinspre Gurile Dunării*, Carpica 23 (1), 95-105.
- Simion, G. 1995a, *Cercetările de pe valea Celicului (Celic Dere)*, Analele Dobrogei, Serie Nouă 1, 250-253.
- Simion, G. 1995b, *Das Gräberfeld von Ciucurova*, Thraco-Dacica 16 (1-2), 151-170.
- Simion, G. 1997, *Așezarea de la Celic-Dere. Interpretări etno-culturale și implicații în cronologia Hallstattului târziu*, in Simion, G. (ed.), *Premier âge du fer aux bouches du Danube et dans les régions autour de la Mer Noire – Actes du Colloque International Septembre 1993 Tulcea*, Tulcea, 237-251.
- Simion, G., 2000, *Tombes tumulaires dans la nécropole de Celic-Cere*, in *Tombes tumulaires de l'Âge du Fer dans le Sud-est de l'Europe, Actes du II^e Colloque International d'Archéologie Funéraire, Tulcea, Brăila, Călărași, Slobozia, 18-24 Septembre 1995*, Tulcea, 68-82.
- Simion, G. 2003a, *Cercetările de pe valea Celicului (Celic Dere)*, in *Culturi antice în Zona Gurilor Dunării. Vol. I. Preistorie și protoistorie*, Biblioteca Istro-Pontica. Seria Arheologie 5, Cluj-Napoca, 213-216.
- Simion, G. 2003b, *O necropolă din secolul VI-V. a Chr. la Isaccea*, Peuce, serie nouă 1, 113-128.
- Simion, G., Cantacuzino, Gh. 1962, *Cercetările arheologice de la Telița*, Materiale și Cercetări Arheologice 8, 373-382.
- Simion, G., Lăzurcă, E. 1980, *Așezarea hallstattiană de la Beidaud – Tulcea*, Peuce 8, 37-54.
- Șirbu, V., Ștefan, D., Duțescu, M. 2008, *Telita - Celic Dere. Landscape Studies*, in Șirbu, V., Ștefănescu, R. (eds.), *Funerary Practices in Central and Eastern Europe (10th century BC – 3rd century AD). Proceedings of the 10th International Colloquium of Funerary Archaeology, Tulcea, 10-12 October 2008*, Brăila-Brașov, 201-214.
- Șirbu, V., Ștefan, M.-M., Ștefan, D., Jugănar, G., Bochnak, T., 2013, *The Necropolis from Telița-Celic Dere (6th–3rd century BC), Tulcea County, Romania - The Study Case of Tumulus T44*, in Șirbu, V., Ștefănescu, R. (eds.), *Necropolises, Cult places, Religion, Mythology” - The Thracians and their Neighbours in the Bronze and Iron Ages, vol. II, Proceedings of the 12th International Congress of Thracology, Târgoviște, 10th-14th September 2013*, Brașov, 347-372.
- Șirbu, V., Ștefan, M.-M., Ștefan, D., Bochnak, T., Jugănar, G., Davîncă, D., Nicolaescu, M., Asăndoaie, R. 2014, *Telița, com. Frecăței, jud. Tulcea. Punct: Celic Dere*, *Cronica Cercetărilor Arheologice din România. Campania 2013*, 39-40, 285-287.

- Sîrbu, V., Ștefan, M.-M., Ștefan, D., Bochnak, T., Ailincăi, S.-C., Jugănar, G. 2015, *Așezarea și necropola de la Telita-Celic Dere, com. Frecăței, jud. Tulcea, Punct: Celic Dere*, *Cronica Cercetărilor Arheologice din România*. Campania 2014, 56-57, 351.
- Sîrbu, V., Ștefan, M.-M., Ștefan, D., Ailincăi, S.-C., Jugănar, G., Bochnak, T., Bochnak, A., Davîncă, D. 2016, *Telița, com. Frecăței, jud. Tulcea. Punct: Celic Dere*, *Cronica Cercetărilor Arheologice din România*. Campania 2015, 98-101, 395-399, pl. 1-4.
- Sîrbu, V., Ștefan D., Bochnak, T., Ștefan, M., Jugănar, G. 2018, *Edirlen, o enigmatică cetate din nordul Dobrogei (jud. Tulcea, România)/Edirlen, an enigmatic fortress in Northern Dobruja (Tulcea county, Romania)*, in Zanoci, A., Băț, M., Ailincăi, S.C., Țârlea, A. (eds.), *Cercetări interdisciplinare în siturile din epoca fierului din spațiul tiso-nistean. Materialele colloquium-ului de vară de la Saharna 13-16 iulie 2017*, Biblioteca Istro-Pontica. Seria Arheologie 17, Tulcea-Chișinău, 119-144.
- Sîrbu, V., Ștefan, M.-M., Ștefan, D., Bochnak, T. 2021, *Funerary practices during the 6th -5th centuries BC in Telița 'Celic Dere', at the Lower Danube*, in Teleagă, E. (ed.), *Funeralkultur der Thraker und Skythen des 7. bis 5. Jahrhunderts v. Chr. an der unteren Donau*, SEAT 5, Rhaden: Verlag Marie Leidorf, 225-270.
- Stoian, I. 1957, *În legătură cu vechimea teritoriului rural al Histriei*, *Studii și Cercetări de Istorie Veche* 8, 183-204.
- Ștefan, D. 2010, *Geophysics as an aid in funerary site interpretation*, *Mousaios* 14, 175-185.
- Talmațchi, G. 2010, *Semne monetare din aria de vest și nord vest a Pontului Euxin. De la simbol la comerț (secolele VI-V a.Chr.)*, Ed. Mega, Cluj-Napoca.
- Talmațchi, G. 2013, *New possible approach on the significance of "arrowhead"- shaped monetary signs especially cast for trade purposes*, *Peuce*, Serie Nouă 11, 307-326.
- Todorova, H. 2016, *Durankulak, Band III, Die Helenistischen Befunde*, Verlag Marie Leidorf, Rahden.
- Tonkova, M. 2009, *On human sacrifice in Thrace (on archaeological evidence)*, in Căndea, I. (ed.), *The Thracians and their neighbours in antiquity. Studia in honorem Valerii Sirbi*, Brăila, 503-514.
- Vanchugov, V.P., Brujako, I.V., Sîrbu, V., Niculiță, I.T. 1999a, *Cercetările arheologice de la Novoselskoe-Satu Nou. Campaniile 1997-1998*, in *Cercetări arheologice în aria nord tracă III*, București, 223-277.
- Vanchugov, V.P., Sîrbu, V., Niculiță, I.T., Bărcă, V. 1999b, *Cercetările arheologice de salvare de la Orlovca-Cartal (Ucraina) – campania 1998*, in *Cercetări arheologice în aria nord-tracă III*, București, 135-221

- Vulpe, R. 1954, *Șantierul arheologic Histria (r. Istria, reg. Constanța): Săpăturile de la Tariverde, 1953*, Studii și Cercetări de Istorie Veche 5 (1-2), 100-108.
- Vulpe, R. 1955, *Cercetări în teritoriul rural al Histriei*, in *Șantierul arheologic Histria*, Studii și Cercetări de Istorie Veche 6 (3-4), 541-551.
- Zakšek, K., Oštir, K., Kokalj, Ž. 2011, *Sky-View Factor as a Relief Visualization Technique*, Remote Sensing 3 (2), 398-415.

*

- Монахов С.Ю. 2003, *Греческие амфоры в Причерноморье. Типология, каталог-определитель*, Москва, Саратов.