

UNIVERSITATEA „ALEXANDRU IOAN CUZA” DIN IAȘI

FACULTATEA DE ISTORIE

OPȚIUNI ISTORIOGRAFICE

Serie nouă

Numărul 2 / 2025



EDITURA UNIVERSITĂȚII „ALEXANDRU IOAN CUZA” DIN IAȘI

2025

COMITETUL ȘTIINȚIFIC

Lucrețiu Mihailescu-Bîrliba, Laurențiu Rădvan, Mircea-Cristian Ghenghea, Adrian Vițalaru, Felix-Adrian Tencariu (Facultatea de Istorie, Universitatea „Alexandru Ioan Cuza” din Iași), Mihail Băț (Facultatea de Istorie și Filosofie, Universitatea de Stat din Moldova, Chișinău)

COMITETUL DE REDACȚIE

Maria-Cristina Ciobanu (redactor șef), Rebeca Cefalan, Adina Amărieuței, Mălina Libiț, Andrei Archiudean, Bogdan-Ștefan Novac, Vlad Lungu (Facultatea de Istorie, Universitatea „Alexandru Ioan Cuza” din Iași)

Adresa (materiale trimise pentru publicare sau altă corespondență): Facultatea de Istorie, Universitatea “Alexandru Ioan Cuza”, B-dul Carol I, Nr.11, 700506 - Iași, România.

Telefon: +40 758 550 922 (Comitetul de Redacție); +40 (232) 201056 (Secretariatul Facultății de Istorie)

Website: <https://optiuni-istoriografice.ro/>

E-mail: optiuni.istoriografice.is@gmail.com

Responsabilitatea pentru conținutul materialelor publicate revine exclusiv autorilor.

Tehnoredactor: Florentina Crucerescu

Redactor: dr. Marius-Nicușor Grigore

ISSN 1582 – 2842

CUPRINS / SUMMARY

ARTICOLE

Focul în preistorie: de la supraviețuire la inovație tehnologică / Fire in Prehistory: from Survival to Technological Innovation Adina AMĂRIUȚEI	7
Pigmenți și culoare în preistorie: de la primele picturi rupestre la cultura Cucuteni / Pigments and Color in Prehistory: from the Earliest Cave Paintings to the Cucuteni Culture Analisa FOCA	31
Metode de analiză și evoluția abordărilor în studiul ceramicii arheologice / Methods of Analysis and the Evolution of Approaches in Archaeological Pottery Studies Elena-Camelia PINTILIE	63
A Review of Interpretative Approaches Regarding Ashmounds Features From Noua Cultures / O analiză a abordărilor interpretative privind așezările de tip cenușar Vlad VOINICIUC	89
The Mobility of the Administrative Personnel in the Roman Empire: A Perspective on the Career of <i>Publius Aelius Hammonius</i> / Mobilitatea personalului administrativ in imperiul roman: o perspectiva asupra carierei lui <i>Publius Aelius Hammonius</i> Valeria PÎNTEA	107
Implicarea femeilor peregrine în viața religioasă a cetății Tomis / Involvement of <i>Peregrinae</i> Women in the Religious Life of Tomis Daria BABII	117
Considerații privitoare la identificarea satelor lui Oană Ureacli din ținutul Putnei / Considerations Regarding the Identification of Oană Ureacli's Villages in the District of Putna Alecsandru VOICU	125
Comunitate și societate. O scurtă monografie a comunei Baru din județul Hunedoara (sec. XIX-XXI) / Community and Society: a Short Monograph of the Commune of Baru, Hunedoara County (19th–21st Centuries) Denis-Sorin CĂLUȘER	133

Legea învățământului primar din 1924 și aplicarea ei reflectată în unele documente oficiale / The Law on Primary Education From 1924 and its Application Reflected in Some Official Documents

Mihai-Daniel BOTEZATU.....151

Ascensiunea nazismului reflectată în paginile ziarului „Adevărul” (1930-1933) / The Rise of Nazism Reflected in the Pages of the Newspaper „Adevărul” (1930-1933)

Dumitrița ILINCĂI 165

PREZENTĂRI DE CARTE

Mary BEARD, *Laughter in Ancient Rome. On Joking, Tickling, and Cracking Up*, University of California Press, Oakland, 2024, 319 p.

Xenia CHIFEAC..... 183

Valerie HANSEN, *Anul 1000. Exploratori, negustori și începutul globalizării*, trad. Matei Ciurică, București, Corint, 2023, 383 p.

Teodor-Răzvan MOISE 191

Kees BOTERBLOEM, *The Dirty Secret of Early Modern Capitalism. The Global Reach of the Dutch Arms Trade, Warfare and Mercenaries in the Seventeenth Century*, Routledge, New York, 2020, 244 p.

Andrei-Robert VASILACHE 197

Constanța VINTILĂ, Giulia CALVI, Mária PAKUCS-WILLCOCKS, Nicoleta ROMAN, Michał Wasiucionek, *Lux, modă și alte bagatele politicești în Europa de Sud-Est, în secolele XVI-XIX*, Humanitas, București, 2021, 431 p.

Andrei BORDEIANU..... 206

Martyn RADY, *Habsburgii. Ambiția de a stăpâni lumea*, traducere din limba engleză de Lia Decei, prefață de Matei Cazacu, Corint Istorie, București, 2023, 592 p.

Cristiana MURARIU 215

ARTICOLE

A REVIEW OF INTERPRETATIVE APPROACHES REGARDING ASHMOUNDS FEATURES FROM NOUA CULTURES

O ANALIZĂ A ABORDĂRILOR INTERPRETATIVE PRIVIND AȘEZĂRILE DE TIP CENUȘAR

Vlad VOINICIUC*

Keywords: *archaeology, ashmounds, Noua culture, interpretation, Bronze Age.*

Cuvinte cheie: *arheologie, cenușare, cultura Noua, interpretări, Epoca Bronzului*

Abstract: This study examines the phenomenon of ashmounds. Using different works, it was possible to explore the variability of these features on the territory of Romania and the Republic of Moldova. Drawing on a wide range of literature I reviewed prevailing theories concerning the formation and interpretation of these features. The analysis begins with early interpretations grounded on ethnographic evidence and continues to more recent pedologic studies. Regarding the functionality, it was possible to illustrate possible ritualistic purposes that can be attributed to an ashmound. I was also able to present the impact of industrial agriculture upon the conservation and perception of ashmounds. Based on existing works it was possible to show different theories regarding the origins of the Noua-Sabatinoanca-Coslogeni cultural group and their interactions with the local communities of the Moldavian plateau.

Rezumat: Acest studiu examinează fenomenul cenușarelor. Folosind diferite lucrări, a fost posibilă explorarea variabilității acestor caracteristici pe teritoriul României și al Republicii Moldova. Utilizând o literatură diversă, am analizat teoriile predominante privind formarea și interpretarea acestora. Analiza începe cu interpretări timpurii bazate pe dovezi etnografice și continuă cu studii geologice mai recente. În ceea ce privește funcționalitatea, a fost realizabilă ilustrarea posibilelor scopuri rituale, care pot fi atribuite unui cenușar. De asemenea, am reușit să prezint impactul agriculturii industriale asupra conservării și percepției cenușarelor. Pe baza lucrărilor existente, a fost posibil să prezint diferite teorii privind originile

* Bachelor student, Faculty of History, "Alexandru Ioan Cuza" University of Iași, email: vladvoinicu44@yahoo.com.

grupului cultural Noua-Sabatinovka-Coslogeni și interacțiunile acestora cu comunitățile locale din Podișul Moldovei.

I. Introduction

The topic of this article is meant to explore different historiographic approaches regarding the ashmounds of Late Bronze Age Europe, more specifically the Noua-Sabatinovka-Coslogeni cultural group. The aim of this article is to present an overview of the theories regarding the interpretation of ashmounds.

In order to do this, I used the archaeological literature containing local sources and international ones to build a history of research and to summarize the proposed theories regarding the functionality and creation of ashmounds. The first step consisted of a thorough documentation of the available sources. The point of interest was identifying the different theories regarding the formation and possible uses of an ashmound. Afterwards, I summarized these hypotheses in order to be able to identify gaps in the research or other methodological issues and to offer a chronological image of the emergence and transformation of the theories surrounding this phenomenon. The last step consisted of providing an overview of the current state of knowledge.

The chosen topic is one of interest because the phenomenon is still yet to be fully explained, and a review regarding the hypothesis is able to assess past interpretations, spot gaps in the research and to help in the formation of new theories.

For this study it is important to note that ashmounds are commonly referred in the bibliography as: ash hills¹, ash-pans²,

¹ Casandra Brașoveanu, Alin Mișu-Pintilie, Radu Brunchi, „Inside Late Bronze Age Settlements in NE Romania: GIS-Based Surface Characterization of Ashmound Structures Using Airborne Laser Scanning and Aerial Photography Techniques”, în *Remote Sensing*, 2023, p. 2.

² Neculai Bolohan, „Resuming the research of the Coslogeni group (Late Bronze Age) settlement systems. First step”, în *Cultură și civilizație la Dunărea de jos*, XXVIII, Călărași, Editura Muzeul Dunării de Jos, 2011, p. 130-132.

*zólniki*³ in the Sabatinovka culture, and *cenușare*⁴ for the Coslogeni and Noua groups. They are generally defined as grey coloured spots visible on the surface in which archaeological material is identified.

The area of importance for this study is the space inhabited by the Noua-Sabatinovka-Coslogeni cultural group, defined as the space situated between the Eastern Carpathian Mountains and Dnieper River. The southern border is the Danube and the Black Sea, and the northern one is largely defined by the Bug River. This geographic area is largely defined by the Pontic steppe in the east, the Moldavian Plateau in the West, and the plain of the lower Danube (Fig. 1).



Fig. 1. The Noua-Sabatinovka-Coslogeni cultural group area⁵.

Regarding the landscape, the Nordic region of the black sea and its soil-vegetation zonality is expressed in three regions: grasslands-fescue-feather grass steppes on chernozems, fescue-feather grass on the southern chernozems, and the fescue-feathers grass steppes and wormwood steppes on dark chestnut

³ Florescu Adrian, „Contribuții la cunoașterea culturii Noua”, în *Arheologia Moldovei*, vol. II-III, Iași, Editura Republicii Populare Romîne, 1964, p. 1.

⁴ Valeriu Cavruc, „Câteva considerații privind originea culturii Noua”, in *Angustia*, vol. I, nr I, Sfântu Gheorghe, Editura Carpatica, 1996, p. 67.

⁵ Sorin-Cristian Ailincăi, Adrian Bălășescu, Andreea Dima, Gabriela Odilia Sava, Valentin Radu, Alexandra Tarlea, Ghenadie Sirbu, Florian Mihail, Aurel-Daniel Stănică, Marian Mocanu, Micu, Cristian, Răzvan-Marius Cernamoriți, „Jijila -A Late Bronze Age Site on the Lower Danube”, în *Archaeologica Bulgarica*, 27, 2023, p. 1-28.

and solonchic soils⁶. The climate of this region is warm and dry, the mean temperature total in January is -1°C - $+6^{\circ}\text{C}$. It also has inconsistent snow cover of less than 5-8cm⁷.

Situated north of this region is the Dnieper lowland. Geomorphologically, it is composed of three parts: the Dnieper flood plain with meadows and flooded forests, the sandy terrace above the flood plain, and the plains of loess that cover the terraces situated above the flooding level⁸.

It is not known if this climate and vegetation were the same during the Bronze Age, due to the lack of pollen diagrams available for this region⁹. During the early middle Holocene that spanned from 8.2ka B.P to 3ka BP, the climate was warm and humid favouring development of the vegetation cover (Fig. 2), only afterwards during the Subboreal period would it become arid¹⁰.

It is important to mention that with the help of pollen and spores it was possible to partially reconstruct the climate and fauna in the Apuseni Mountains. In the middle Holocene, between 6800 B.P and 4800 B.P the climate was similar to the modern one. Later for the time span of 5500 B.P and 3200 B.P the samples indicate that the mean temperature of the coldest month and the mean annual temperature remain somewhat stable, but the mean annual precipitation decreases while the mean temperature of the warmest month increases by $\sim 2^{\circ}\text{C}$. The flora is marked by an increase in pollen percentages for *Carpinus* *Betulus*. Between 4200 B.P and 3800 B.P the climate is colder than during the previous intervals and the pollen percentage of *Fagus Sylvatica* increases¹¹.

⁶ Bostonalieva Zhyldyz, „Late Quaternary Climate Change in Western Eurasia”, Berlin, 2013, p. 31 (teză de doctorat).

⁷ *Ibidem*.

⁸ *Ibidem*, p. 26.

⁹ Elke Kaiser, „Subsistence in the Late Bronze Age of the northern Black Sea region: a case study of Taraclia-Gaidabul (Republic of Moldova)”, in *Godišnjak Jahrbuch*, Vol. 52, Sarajevo, Editura Fondacija, 2024, p. 49.

¹⁰ Bostonalieva Zhyldyz, *op. cit.*, p. 96.

¹¹ Angelica Feurdan, „Pollen-based quantitative reconstructions of Holocene climate variability in NW Romania”, in *Palaeogeography, Palaeoclimatology, Palaeoecology*, Vol. 260, Amsterdam, Ed. Elsevier, 2008 p. 495-500.

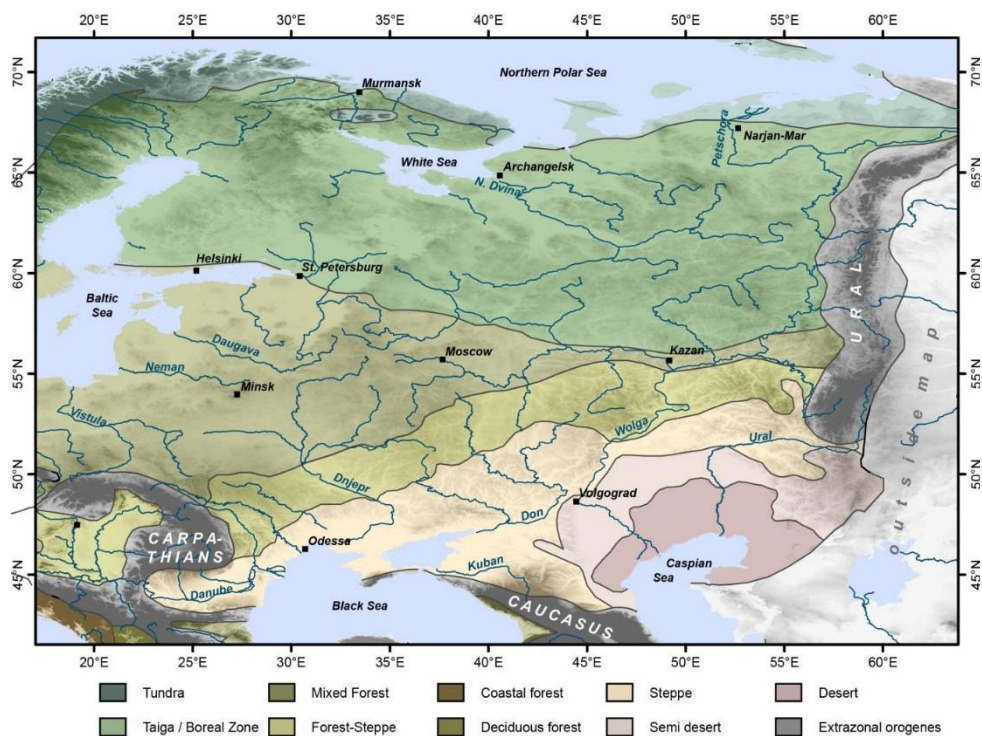


Fig. 2. Map of landscape zones¹².

II. History of research

The first ashmounds were identified by Zaretsky at the end of the XIXth century and his findings are related to the Ukraine regions¹³. At the beginning of the XXth century, Gorodčov also concerned himself with the study of ashmounds¹⁴.

¹² Zhyldyz Bostonaliev, *Late Quaternary Climate Change in Western Eurasia*, 2013. (teza doctorat)

¹³ Zaretskyi, I.A. „Zametka o drevnostyakh Khar’kovskoy gub. In Bogodukhovskogo Uyezda, Slobody Likha-Chevki; Khar’kovskiysbornik: Kharkiv”, Ukraine, 1888 apud Casandra Braşoveanu, Alin Mişu-Pintilie, Radu Brunchi, „Inside Late Bronze Age Settlements in NE Romania: GIS-Based Surface Characterization of Ashmound Structures Using Airborne Laser Scanning and Aerial Photography Techniques”, in *Remote Sensing*, 2023, p. 2.

¹⁴ *Ibidem*.

Regarding the Noua culture, in the last century it was firstly identified only through a series of accidental discoveries in Transylvania, only in the post-war period with the increased number of archaeological surveys it was possible to identify the area inhabited by the Noua communities¹⁵.

The first mention of the Noua culture inside the territory of Romania was made by Ion Nestor in 1938, in the same period it was also identified in Ukraine by T. Sulimirski¹⁶.

Afterwards, Kurt Horedt started excavating in 1949 the Teiuș necropolis situated in Alba Iulia County. He based his research on the previous findings in the same region of two inhumation graves, discovered by A. Ferenczi and M. Moga, in 1938¹⁷. He was able to identify 14 graves, out of which 5 were identified as Noua culture¹⁸. He defined them based on the material found and the way the bodies were deposited. He concluded they were all in crouched position and similar ceramic styles¹⁹.

Afterwards, beginning with the 1950s, Mircea Petrescu-Dîmbovița turned his attention to the issues of the Noua culture and began excavating a series of necropolises and settlements at Trușești, Botoșani County²⁰.

In the same time period Székely Zoltán started the excavation of the Peteni site, situated in Covasna County. The first excavation was in 1960, when he was able to identify two circular firehearts built out of stone slabs²¹. The stratigraphy shows an ashy layer mixed with pottery

¹⁵ Adrian Florescu, „Contribuții la cunoașterea culturii Noua, în *Arheologia Moldovei*, II-III, Iași, Editura Republicii Populare Romîne, 1964, p. 1.

¹⁶ *Ibidem*, p. 1.

¹⁷ Kurt Horedt, „Cercetările arheologice din regiunea Hoghiz-Ugra și Teiuș” in *Materiale arheologice privind istoria veche a R.P.R.*, I, București, Editura Academiei Republicii Populare Române, 1952, p. 799.

¹⁸ *Ibidem*, p. 805.

¹⁹ *Ibidem*.

²⁰ Adrian Florescu, „Contribuții la cunoașterea culturii Noua, în *Arheologia Moldovei*, II-III, Iași, Editura Republicii Populare Romîne, anul 1964, p. 2.

²¹ Zoltán Székely, „Săpăturile executate de muzeul din Sf. Gheorghe (1959-1966)”, in *Materiale și cercetări arheologice*, 9, București, Editura Academiei Republicii Socialiste România, 1970, p. 305.

fragments and animal bones, situated underneath the top soil²². The excavation continued in 1978, when he identified two pit-houses with a rectangular shape²³. In 1979 he identified another pit-house with the same rectangular shape, inside it he noted the presence of a compacted clay floor, pottery fragments and a circular fireheart made of clay²⁴. In 1980 he identified yet another pit-house with a rectangular shape with pottery fragments and fireheart fragments²⁵.

In 1951, the first excavation of an ashmound in Romania was carried out in the region of Moldova, at Corlăteni-*Pe Țarină* by Ion Nestor²⁶. He noted the presence of a multi-layered settlement which spanned from the Eneolithic to Hallstatt. In regard to the Bronze Age settlement he noted the existence of an ash layer that contained animal bones and grinding stones but “extremely rare” daub fragments²⁷. He concluded, based on the pottery fragments, that the Bronze Age habitation layer belongs to the Monteoru culture²⁸.

A few years later, in 1953 Mircea-Petrescu Dîmbovița started his excavation at Trușești-*Movila din Șesul Jijiei*, where he encountered a first layer brown in colour, in which ash, burnt earth, charcoal, numerous ceramic sherds, and animal bones were present. This layer was dated to the Neolithic period based on the discovery of a flint sickle-knife and an atypical ceramic fragment attributed to the Cucuteni culture. Above this layer lies another, brownish in colour, composed of a large quantity of ash, forming a small mound measuring 17.5 meters in diameter and 0.35 meters in height. This layer is characterized by bands of white ash mixed with charcoal, as well as a

²² *Ibidem*.

²³ Zoltán Székely, „Considerații arheologice privind așezarea din epoca bronzului de la Peteni, Jud. Covasna”, in *Materiale și Cercetări Arheologice*, Vol. 14, București, Editura Academiei Republicii Populare Române, 1980, p. 129-131.

²⁴ *Ibidem*.

²⁵ Zoltán Székely, „Rezultatul ultimelor cercetări din județul Covasna, în așezări din epoca bronzului și prima vîrstă a fierului”, in *Materiale și cercetări arheologice*, Vol. 15, București, Academia de Științe Sociale și Politice a Republicii Socialiste România, 1983, p. 143.

²⁶ Adrian Florescu, *op. cit.*, p. 3.

²⁷ Ion Nestor, „Șantierul Valea Jijiei”, in *Studii și Cercetări de Istorie Veche și Arheologie*, III, București, Editura Academiei Republicii Populare Române, 1952, p. 89.

²⁸ *Ibidem*, p. 90.

high concentration of animal bones and ceramic fragments. This is overlaid by a third layer, of similar thickness to the previous one, which also contains a large amount of ash, burnt earth, hearth remains, ceramic sherds, and animal bones. He concludes that these three layers form an ashmound, which he compares to the *zolniki*²⁹.

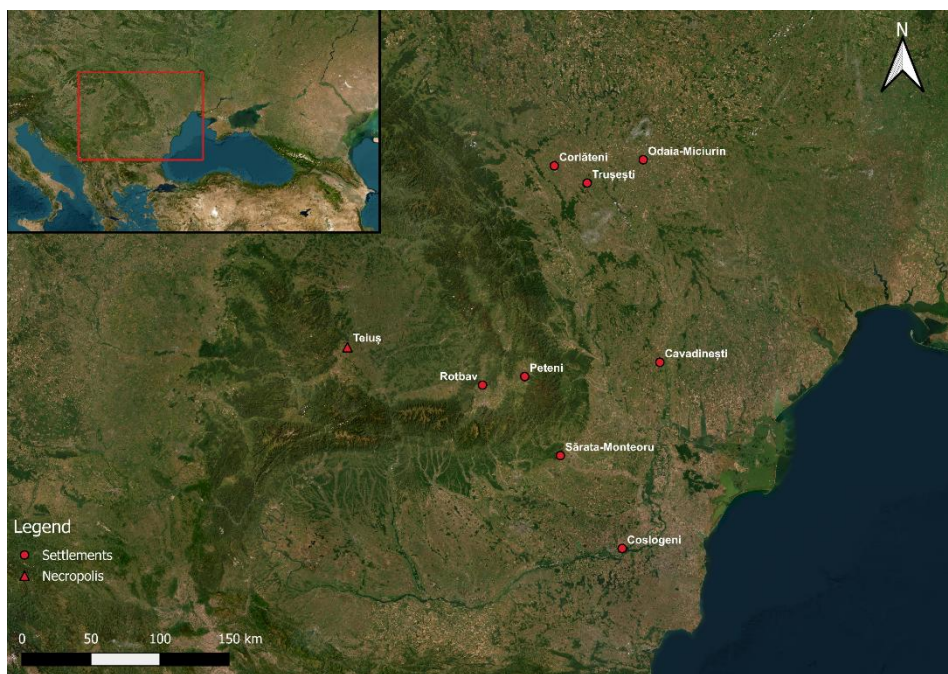


Fig. 3. Placements of Noua-Sabatinovka-Coslogeni sites studied in this article.

In 1958 during rescue excavations of an ashmound at Cavadinești-*Ripa Glodului*, I. Dragomir encountered two distinct layers. The first one being the ashmound which was divided in two habitational layers, and the second distinct layer belonging to the Hallstatt period. Inside the ashmound they were able to identify the compacted clay floor with a rectangular shape and a fireheart. Alongside them there were bronze age pottery fragments and a scored bovine scapula. Nearby he also noted the discovery of a fireheart that was used to burn cow dung. In favour of this interpretation, he argues that the

²⁹ Mircea Petrescu-Dîmbovița, „Șantierul Trușești”, in *Studii și Cercetări de Istorie Veche și Arheologie*, IV, București, Editura Academiei Republicii Populare Române, 1953, p. 29-30.

yellow-redish colored ash was the result of dust that turned reddish when it mixed with dung during the sweeping process. He also mentions the existence of burnt sheep excrements and fragments of materiality³⁰.

III. Interpretations

In 1963, Adrian C. Florescu identified a series of common features within the settlements of the Noua culture, such as their location in open areas on terraces, proximity to a water source, and the absence of fortifications. At this point, he also mentioned the existence of ashmounds and argued that they represented the remains of above-ground dwellings with wattle-and-daub walls. He supported this interpretation through the discovery within the ashmounds of: fire hearths, floor remnants, ovens, and fragments of daub. He also drew attention to the research methodology, which was focused mainly on the ashmounds, while the 'empty' spaces were largely ignored. Additionally, he noted the distribution of material remains, which showed maximum density within the ash pits and became increasingly sporadic with distance from them³¹.

Based on his excavation at Cavadinești at Galați County, Dragomir published in 1981 an interpretation based on ethnographic arguments, introducing a new interpretation into the literature. He identified within them carbonized traces of ovicaprine fecal matter, arguing that the ashmound was the location of a bronze age sheepfold, where animal dung was burned. The basis of this interpretation was based on the small number of osteological fragments situated in the vicinity of the ashmound, and the identification of burned daub that is easily crumbled which had wattle impressions that were interpreted as the remains of a burned dwelling, a practice still observed today among transhumant communities when leaving an area. The traces of ash were created by the use of fecal matter as a traditional construction material for dwellings as well as auxiliary structures, with the burning

³⁰ Ion T. Dragomir, „Săpăturile arheologice de la Cavadinești”, in *Materiale și cercetări arheologice*, XII, București, Academia de Științe Sociale și Politice a Republicii Socialiste România, 1961, p. 151-152.

³¹ Adrian Florescu, *op. cit.*, p. 4.

of this binder producing the ash. On ethnographic grounds, the significant number of tools made from bone material is also explained, as pastoral communities have a tradition of manufacturing and using such implements. The burning of dung also serves the purpose of reducing the number of insects present in the settlement.

The conclusion of his study was that an ashmound is formed by multiple habitational layers, that in addition with the building material results in significant quantities of ash after a burning event³².

In 1996 Valeriu Cavruc developed a new interpretation regarding ashmounds. He theorized that they are a phenomenon of eastern origin³³. He argues that the Noua culture was one that migrated from the east and overlapped with the local Middle Bronze Age cultures³⁴. The common cultural elements between the Sea of Azov and the Carpathian Mountains indicate a shared factor that was fundamental to the cultural homogenization during the Late Bronze Age, these shared elements include ceramic traditions and the presence of ashmounds, which have been identified both within the territory of Romania, and in Srubnaya settlements in the western area of their distribution³⁵.

A typology of ashmounds inside a settlement was proposed in 2006 and later 2016 by Neculai Bolohan. He bases his model upon the density, size and internal structures of the ashmounds associated with the Coslogeni group. He identifies four different types: the first type consists of one or more ashmounds inside of a settlement that may be aligned parallel to a river or in concentric circles around a stable body of water. The second one consists of a single ashmound that can span up to 80 meters in diameter, and it contains traces of platforms, daub, firehearts and pit-houses. The third type of settlement is positioned on a raised slip of land and the edge of it is defined by a defensive trench.

³² Ion T. Dragomir, „Contribuții arheologice și etnografice referitoare la procesul de formare al așezărilor de tip cenușar „zoliniki”, în *Danubis*, 1981, nr X, Galați, Editura Muzeului de Istorie Galați, 1980, p. 33-36.

³³ Valeriu Cavruc, „Câteva considerații privind originea culturii Noua”, in *Anguista*, I, nr I, Sfântu Gheorghe, Editura Carpatica, 1996, p. 68.

³⁴ *Ibidem*.

³⁵ *Ibidem*, p. 68-69.

The final type is formed by a group of ashmounds situated on a promontory and is delimited by a trench³⁶.

Regarding the geology of the ashmounds, the study of Haită managed to propose a few hypotheses. He analysed the site of Coslogeni, where it was possible to identify a series of ashmounds in which there were traces of firehearts and kilns along with burned daub. These were interpreted as dwellings. During the campaigns conducted during the 1980s it was possible to discover a total of 16 kilns and firehearts inside a single ashmound³⁷.

In another ashmound the cultural layers were sufficiently preserved to be able to identify five successive habitational layers. The stratigraphy of the site consists of a Neolithic settlement layer, above which a burial mound was erected. This mound was later partially overlaid by the Coslogeni bronze age settlement. The bronze age occupation is characterized by an ashmound, within which five successive layers were identified. The first phase consists of a clay platform covered by an ash layer. The second phase comprises a second clay platform, again overlain by an ash layer. The third and fourth phases are represented by two distinct ash layers, while the fifth and final phase consists of another clay platform with an overlying ash layer³⁸.

All of the mentioned platforms are built from the same materials and are compacted. The building material used were silt sediments and fine sands extracted from the nearby alluviums. In the second platform it was identified a transitional layer between the construction layer and the grey habitational layer. This transition layer was a granular material with a thickness of 3 cm that contained yellow silt fragments with a dimension measured in the centimetres, that could have been formed by the destruction of the vertical elements of the building³⁹.

³⁶ Neculai Bolohan, „Bronzul Târziu la Dunărea de Jos: Componente și relații interculturale”, Cluj-Napoca, Editura Mega, 2016, p. 108-109.

³⁷ Cătălin Dobrinescu, Constantin Haită, „Așezări de tip cenușar din Bronzul Târziu în Sud-Estul României”, in *Cultură și Civilizație la Dunărea de jos*, XXII, Călărași, Editura Muzeul Dunării de Jos, 2005, p. 422-423.

³⁸ *Ibidem*, p. 423.

³⁹ *Ibidem*, p. 424.

The layers between the platforms have a small percentage of anthropic elements. They include: fine charcoal, shell fragments, burned daub and fine silt, frequent yellow silt fragments, on the upmost part there were fish bones and pottery sherds. It is important to note that there were carbonated granulates that may originate from the chemical transformation of the ash⁴⁰.

The anthropic constituents are not clustered, they are dispersed inside the fine silt matrix inside the ashmound, that when mixed with organic material takes on a brown-grey color. And within ashmound I, bioturbation also played a role in the creation of this matrix. After an analysis conducted upon the sediments, he concluded that there were no traces of a thermic transformation inside the sediments⁴¹.

Building upon this study, Michael Facklam used the comparative method by conducting new surveys at the site near the village of Odaia-Miciurin, where he cored two ashmounds and collected soil samples from the vertical profile of a third, with the goal of analysing the samples in the laboratory for carbonate content, C 14, presence of organic material, particle distribution, and humus content of the soil. Based on this evidence, he supports the idea that the “ash” layer differs from the other layers only by its carbonate content. Furthermore, the same presumed ash layer contains an average of 35% clay, with most samples containing around 30%. Based on this, he theorized that the ash layer should be described as clayey silt, while the layers underneath it are part of the loam class. More importantly, the carbon content does not show any significant differences between the “ash” layer and the humus layer⁴². He argues, based on the uniform distribution of carbonates and their presence within the “ash” layer, that soil formation either occurred through an already carbonate-rich and homogenized layer or through the homogenization of the soil over thousands of years through bioturbation.

⁴⁰ *Ibidem*.

⁴¹ *Ibidem*.

⁴² Michael Facklam, „Bodenkundliche Untersuchungen”, in *Die Seidlung mit „Aschenügeln” beim Dorf Odaia-Miciurin Republik Moldova*, 2011, XIX, Editura Tyragetia, Chişinău, p. 369-374.

However, he argues that the second theory is unlikely, as a clear boundary between the layers has been observed⁴³.

Additionally, based on the presence of humus-type soil lacking carbonates in many of the animal tunnels, he argues that the filling of these tunnels was done with soil dating back to the Bronze Age. This suggests that at the time the ashmounds were formed, the soil was at least partially decalcified. An important observation is also the small number of traces of burning, such as ash and slag⁴⁴.

His conclusion is that the chromatic difference between the ashmound and the surrounding soil is caused by the high percentage of carbonate found inside the ashmound, which has a white or grey colour. The difference between the humus layer and the “ash” layer is only made by the different quantities of organic material⁴⁵.

The next important contribution on this phenomenon comes from Laura Dietrich, who analysed the data from two different sites, Rotbav and Odaia-Miciurin, with the help of which she explains the formation of the ashmound through stratigraphic deposition. She argues that it begins approximately 30–50 centimetres below the ancient walking surface, where a basin was dug⁴⁶. She also draws attention to the intensive agriculture practiced on Romanian territory and how it can affect the preservation of ash pits and even the perception of them, specifically, the complete destruction of the uppermost cultural layer, with the ash pit now appearing flat due to agricultural activity⁴⁷.

At the site of Odaia-Miciurin it was possible to identify a greater quantity of phosphates and carbonates inside the ashmound, compared to its surrounding surface. The identified carbonates are calcium carbonate and calcium oxide, also known as burnt lime. It is important to mention the method of obtaining calcium oxide, which is

⁴³ *Ibidem*, p. 374.

⁴⁴ *Ibidem*.

⁴⁵ *Ibidem*, p. 375-376.

⁴⁶ Laura Dietrich, „Visible workshops for invisible commodities. Leatherworking in the Late Bronze Age Noua culture’s mounds”, in Sorin Ailincăi, Alexandra Țârlea, Cristian Micu (editori) *Din preistoria Dunării de Jos. 50 de ani de la începutul cercetărilor arheologice la Babadag (1962-2012)*, 9, Brăila, Istros, 2013, p. 223.

⁴⁷ *Ibidem*, p. 235.

the result of burning lime at temperatures between 900°C and 1300°C, during this process, calcium carbonate decomposes into burnt lime and carbon dioxide⁴⁸.

At Rotbav, Laura Dietrich suggests that the deposits of burnt lime (CaCO₃) represent an anthropic layer. Based on ethnographic sources, burnt lime is known to have been used in leather processing. Additionally, tools related to leatherworking have been identified near the ashmounds, along with structures interpreted as buildings or annexes. She concludes that the ashmounds functioned as leatherworking workshops, supporting her interpretation with ethnographic parallels, such as the workshops in Marrakesh⁴⁹.

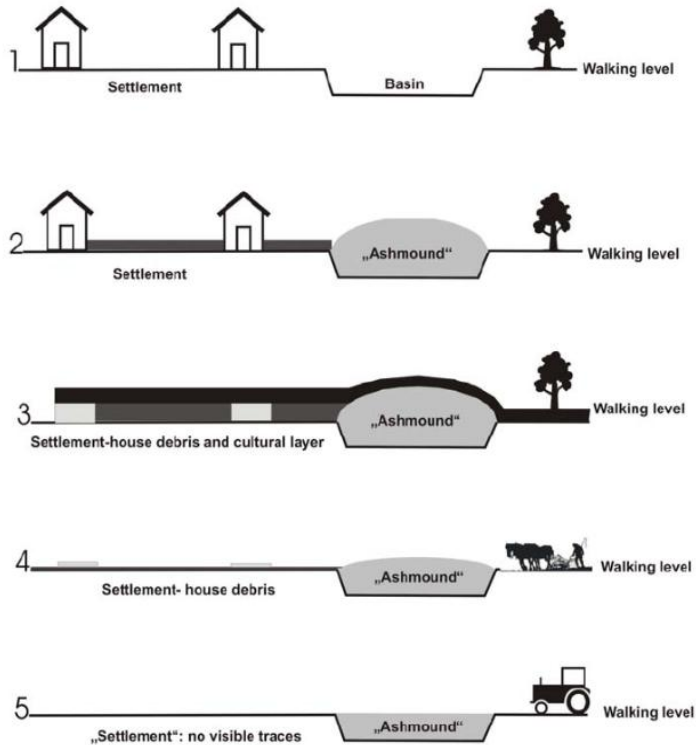


Fig. 4. Formation of an ashmound⁵⁰.

⁴⁸ *Ibidem*, p. 238.

⁴⁹ *Ibidem*, p. 239-240.

⁵⁰ *Ibidem*, p. 236, fig. 4.



Fig. 5. Example of a tannery in Marrakesh⁵¹ (after Dietrich 2013).

Additionally, she argues that because of the high number of ceramic fragments identified inside the ashmound, objects associated with cooking and with kantharoi type vessels, it is plausible that the ashmounds served a ritualistic purpose, something in the feast area of interpretation⁵².

Adding to this discussion is Eugen Sava who after excavating four out of the 25 ashmounds present at the site of Odaia-Miciurin made a series of observations, based on the supposition that the same stratigraphy at Odaia applies for virtually all of the Noua culture ashmounds. He affirms that the formation of an ashmound is a long duration process and that the materiality inside the mound typically do not show signs of secondary burns. On the topic of usable area, he suggests that pit-houses, firehearths and dwellings are found inside or under the mounds, but that the surface of the ashmound is not the same surface as the house. He continues by mentioning that these same structures can be also identified in the vicinity of ashmounds and

⁵¹ *Ibidem*, p. 241, fig. 6.

⁵² *Ibidem*, p. 242.

that sometimes it is not possible to identify any building fragments. The final comment is about the spread of archaeological artefacts, arguing that the only difference in the materiality inside the ashmound and between ashmounds consists of density⁵³.

Based on the excavations conducted at Odaia-Miciurin and on the works of Ja. P Gerškovič he proposes a creation model for the ashmounds. It begins with the first phase, when at the location of the now ashmound there were placed surface structures as well as deepened structures such as animal pens and other light structures, the use of poles is not disregarded because of the use of the waddle and daub technique in the buildings, and it is possible that each house group would be surrounded by a small ditch or fence⁵⁴.

The second phase consists of the intentional abandonment of the settlement, whether inside the current establishment or to another. The inhabitants would leave with the majority of their belongings and the cultural layer expands while the buildings deteriorate⁵⁵.

The next phase consists of the return of the inhabitants, when the old buildings are rebuilt, but also expanded and using new ones, for these structures the old habitational zone is used as well as new places. This pattern repeats until the inhabited area is large enough to resemble today's mounds, and in this model each ashmound represents a cultural layer formed by a singular household⁵⁶.

The final phase of the settlement is the final abandonment, the inhabitants leave with everything that can be utilised and the structures collapse, and the remains will be covered in chernozem soil and vegetation⁵⁷.

Recently, the first regional-scale investigation using modern geospatial methods was conducted by Cassandra Braşoveanu. She managed to provide a series of physical characteristics of the ashmounds in North-East Romania, the most important being lengths

⁵³ Eugen Sava, *Așezări din Perioada Târzie a Epocii Bronzului în Spațiul Pruto-Nistriean*, Chișinău, Editura Tyragetia, 2014, p. 413.

⁵⁴ *Ibidem*, p. 414.

⁵⁵ *Ibidem*.

⁵⁶ *Ibidem*.

⁵⁷ *Ibidem*, p. 415.

ranging between 20.14 m and 66.6 m, and an average slope angle of 4.58°⁵⁸.

Furthermore, she conducted a statistical analysis on 37 different opinions regarding ashmounds and their functionality. The study indicates that 35% of these hypotheses consider them to be dwellings, 24.3% believe they are sacred zones, 24.3% think they have multiple functions, 13.5% waste pits and 5.4% firehearts⁵⁹.

IV. Conclusions

Concluding, the studies mentioned in this paper demonstrate that the theories regarding the phenomenon of the ashmounds are continuously changing. Across them the theme of ethnographic arguments emerges, along with the use of geological ones. Based on this data, along with a sound archaeological interpretation it is possible to recreate the formation of an ashmound and hint at the functionality of one. With this interdisciplinary approach, it was possible to determine that the ashmound is formed from carbonated soil, and not ash. While progress has been achieved in understanding this phenomenon it is necessary to mention the methodological gaps in the research. The most important one is the hyperfixation on the ashmound itself, sacrificing the rest of the settlement in favour of a single structure. This excludes important data regarding the paleoenvironment that is necessary in reconstructing the life of these transhumant communities. Furthermore this limited amount of data only offers us a perspective on a single ashmound inside of a single settlement, and it is unfeasible to apply such a model to all existing ashmounds. Given the complexity of this topic, a single theory may be able to offer only a partial view, therefore it is important to note that they are not mutually exclusive. More precisely, we cannot enforce a

⁵⁸ Casandra Braşoveanu, Alin Mişu-Pintilie, Radu Brunchi, „Inside Late Bronze Age Settlements in NE Romania: GIS-Based Surface Characterization of Ashmound Structures Using Airborne Laser Scanning and Aerial Photography Techniques”, în *Remote Sensing*, 2023 p. 17.

⁵⁹ Casandra Braşoveanu, *Sfârşitul Epocii Bronzului în Bazinul Jijiei: dinamica habitatului şi materialitatea culturii Noua*, Târgovişte, Editura Cetatea de Scaun, 2023, p. 180.

single model on all ashmounds because they consist of light structures that do not preserve much architectural data, consequently it is highly unlikely that a single functional model can account for all Noua-Sabatinovka-Coslogeni ashmounds, as variation in size, materiality and spatial arrangement hint at them not being a single class of structure. Rather they may encompass a range of purposes that have been discussed in the article, ranging from sheepfolds to housing. The state of research concerning this phenomenon provided satisfactory answers regarding the geological composition but other aspects have been neglected, such as what is the functionality of one inside the larger settlement, or the dispersals of them. Further interdisciplinary approaches may help to address these questions, and with the help of GIS and other such systems to identify ashmounds features and to identify a pattern in their positioning inside the settlement and the broader geographic context. Furthermore, a significant amount of data could be gathered with the help of systematic excavations that focus on the entire settlement and not only the ashmound itself. To understand the economic and social behaviour of the NSC cultural group we first need to understand the phenomenon of ashmounds.