

SCIENTIFIC REPORT

STAGE I 2025

Primele populații stepice nord-pontice în Balcani. O perspectivă bioarheologică a comunităților Cernavodă I din bazinul Dunării de Jos (România) / First North Pontic Steppe Populations in the Balkans. A bioarchaeological outlook of Cernavodă I communities in the Lower Danube Basin (Romania), (BioArhSteppe), nr. PN-IV-P1-PCE-2023-1899, contract no. 77PCE/2025.

Objectives

- O.1. Establishing the paleoecological and paleoenvironmental framework and its economic impact on past human communities.
- O.2. Defining the main characteristics of animal and vegetable paleoeconomy and their role in food strategies.
- O.3. Human diet related to health and lifestyle.

STAGE SUMMARY

Phase I of the project *First North Pontic Steppe Populations in the Balkans. A bioarchaeological outlook of Cernavodă I communities in the Lower Danube Basin (Romania)* (BioArhSteppe), project no. PN-IV-P1-PCE-2023-1899, contract no. 77PCE/2025, implemented by the University of Bucharest, aimed to carry out the activities proposed within the first stage of 2025 (A1.1-A1.5). All of the required data were collected from the literature and used for evaluating the current state of knowledge for the various fields of interest. Through multiple field campaigns, sampling was carried out for vegetation and fauna analyses, as well as for dating the studied archaeological layers. Of course, the first results (A1.5) were disseminated in order to increase the visibility of the research carried out by the team members, both nationally and internationally, through participation in conferences and seminars/workshops, and the publication of articles (indexed in ISI or BDI). All the activities proposed for this stage (A1.1-A1.5) were carried out, and as part of the dissemination process (A1.5) the project members delivered three presentations at national (PONTICA International Scientific Session, 58th Edition: „History and Archaeology in the West-Pontic Area”, organized by the Museum of National History and Archaeology Constanța, Constanța, September 25-27, 2025; “Archaeological and Numismatic Research” Symposium, 11th edition, in memoriam Eugen Nicolae, organized by Bucharest Municipality Museum, “Vasile Pârvan” Institute of Archaeology of the Romanian Academy & the Romanian Academy Library, Bucharest, 18–19 September 2025) and international (13th Scientific Conference *Methodology and Archaeometry*, organized by the Department of Archaeology of the Faculty of Humanities and Social Sciences, University of Zagreb, Croatia, 27–28 November, 2025), submitted an article (Web of Science-Journal of Archaeological Method and Theory), and the basic principles of the project were supported by organizing a session at a scientific conference (Session 215 at the 31st EAA Annual Meeting, Belgrade Virtual, 2025), a summer school (ArchaeoSciences 2025 Summer School “Zooarchaeology & Anthropology”, 21–24 July 2025, Sultana, Romania), and a round table/workshop (DOMINO-CLIMATE Romania Workshop, 22–23 October 2025, Bucharest), for which the team of the project had coordination roles, but also participated with lectures and disseminated the first results.

SCIENTIFIC AND TECHNICAL DESCRIPTION

Scientific description highlighting the results of the annual stage and the degree of achievement of the objectives

Activity 1.1 – Administration, documentation and management of the project

Expected results: establishing the strategies for the research directions, working tools, data collection strategies, administrative documentation, team meetings, project website, and annual report.

Within these activities two working meetings were held with the team members for establishing a schedule regarding the achievement of the project objectives, a schedule for fieldwork and sampling for analyses relative to each of the involved domains, as well as for assigning individual tasks and deadlines for the project members.

The project website can be accessed at <https://unibuc.ro/cercetare/promovarea-rezultatelor-cercetarii/proiecte-de-cercetare/proiecte-cu-finantare-nationala/bioarhsteppe/> and is hosted by the website of the University of Bucharest.

There were administrative modifications, especially regarding the updating of the initial contract data. Thus, several justificatory notes were initiated, approved by the contracting authority, through which one project member was replaced and the employment status of four master's students was changed to PhD students, and one PhD student to postdoctoral researcher.

Activity 1.2 – Documentation and field activities, sampling and laboratory analyses for environmental history and settlement evolution

Expected results: archaeological excavations in support of the project's goals, sampling and ¹⁴C dating, mapping, collection of geospatial data, generating evolution models, statistical analysis, field and laboratory reports.

The project members took part in the archaeological field research carried out at the sites Sultana, Chiselet (Călărași County) and Săveni (Ialomița County). These activities came as a support for sampling new materials and enriching the geospatial dataset.

For the Chiselet site, archaeological investigations were conducted at the surface layer, rich in archaeological material and dated as post-abandonment Gumelnița period. Ceramic and faunal materials were sampled. A complex initially attributed to the Cernavodă culture was also investigated. Its rich ceramic and osteological inventory included the osteological remains of three human individuals. Samples were taken for ¹⁴C dating to obtain a precise cultural attribution.

At Săveni (Ialomița County) the archaeological investigations focused on dismantling two Cernavodă I pit-houses. Ceramic and faunal materials, as well as sediment samples for sieving to obtain anthracological and carpological remains, were collected.

An important aspect of the project is the study of Cernavodă I ceramic material through interdisciplinarity. Modern laboratory methods allow the analysis of multiple elements of interest from the internal structure (e.g., natural inclusions, temper) of ceramic samples, providing valuable datasets regarding clay provenance, technological traditions (e.g., paste recipes, forming techniques, firing parameters), possible interactions between contemporary communities and knowledge transfer in well-defined spatial and temporal frameworks.

Although ceramic studies have been, in certain respects and at certain levels, applied in detail at macro- and microscopic scales through archaeometric methods, there is still a plethora of information that can be extracted from the analysis of ceramic inclusions. Precisely for this reason, the Chalcolithic shell-tempered ceramics of the Black Sea region present a high potential to offer new datasets.

Therefore, the ceramic analysis within the project will integrate macroscopic and microscopic data, combining archaeological research methods with analytical procedures from geology, geography, physics, chemistry and biology.

Work has been carried out on designing a database dedicated to collecting information resulting from the macroscopic analysis of ceramic materials. Its role is to standardize data collection and facilitate typological and technological interpretations. Its structure includes nine main categories, as follows:

- i) identification and contextual data (site, stratigraphic context, cultural attributions);
- ii) morphological attributes (shape, profile, structural elements);
- iii) technological attributes (paste type, temper, manufacturing mode);
- iv) dimensional attributes (thickness, diameters, heights);
- v) surface treatment and finish (smoothing, burnishing, slip, pigment);
- vi) functionality and use-wear traces (deposits, firing cracks, abrasions);
- vii) decorative elements (techniques, motifs, vessel positioning);
- viii) quantitative and observational data (frequencies, detailed descriptive notes);
- ix) other observations relevant for contextual and technological interpretation.

The database will be completed and refined as ceramic analysis progresses, depending on needs. This type of data structuring will permit later integration into GIS platforms and statistical models, correlated with spatial data obtained for Cernavodă archaeological sites.

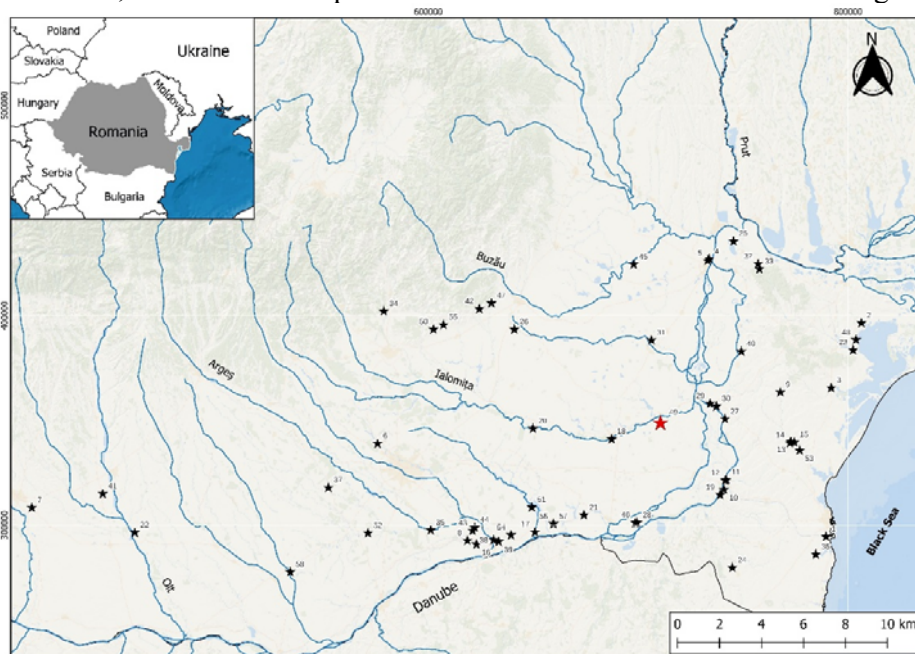


Fig. 1. Spatial representation of the 58 Cernavodă archaeological sites identified on the territory of Romania (the Săveni-La Movile site is marked with a red star).

In the first part of the project, a database was created for the sites attributed to the Cernavodă culture, as a result of extensive documentation of the specialized literature, available excavation reports, and the National Archaeological Record (RAN). This activity aimed at collecting spatial, chronological (including the presence of radiocarbon data), contextual, and preservation-state information regarding the sites, by integrating data from specialized sources. Following this endeavour, 58 archaeological sites containing finds attributed to these communities have been identified so far on the territory of Romania, most of which are recorded in RAN, while some are also included in the List of Historical Monuments (LMI).

The collected geographic coordinates were verified and converted into the national projection system Stereo 70 (EPSG: 3844), and subsequently integrated into a GIS system (QGIS) for their spatial representation.

The result of this working stage consists of a preliminary distribution map of the Cernavodă sites, illustrating the distribution of the 58 sites identified so far (Fig. 1). On this map, the archaeological site of Săveni-La Movile is also highlighted with a red star, as a main reference point within the research.

Regarding the archaeometric analysis of the ceramic materials, two ceramic fragments discovered at the Săveni–La Movile archaeological site have been preliminarily analysed (Fig. 2).

The two samples were investigated through macroscopic analysis, thin sections, and X-ray computed tomography, complementary methods that reveal mineralogical and internal-structure details. This approach was designed as a preliminary stage before extending the research using SEM and XRF on a larger batch of samples.

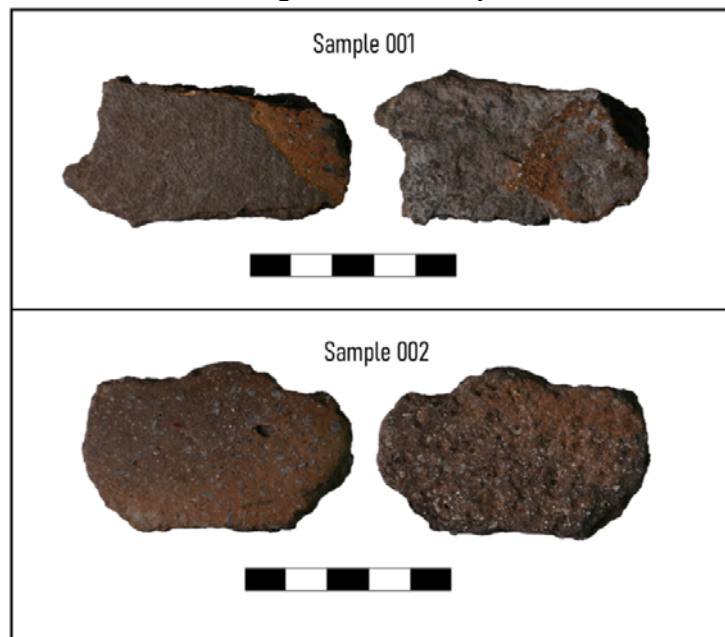


Fig. 2. Frontal and dorsal views of the analyzed archaeological ceramic samples.

The preliminary analyses performed on the two ceramic fragments attributed to the Cernavodă I culture show a well-controlled production technology and a specific paste recipe based on crushed-shell temper. Macroscopic and microscopic observations (obtained through an Olympus stereomicroscope) indicate that both samples are well fired, in a partially oxidizing atmosphere, having a semi-fine paste with uniformly distributed crushed shells and no coarse inclusions, suggesting a careful selection of clay or its cleaning from impurities before use, and implicitly an initial standardization of the manufacturing process.

Petrographic analyses through thin sections confirm the deliberate use of shell as temper (Fig. 3), by determining their non-fossil nature. They also provide detailed mineralogical and technological information, indicating firing temperatures between approximately 500 °C and 650 °C. The fact that the calcite fragments preserve their microcrystalline structure shows that temperatures did not exceed the critical threshold of thermal decomposition, suggesting a short firing process or uneven heat distribution, characteristic of open or semi-open installations specific to the period.

Computed tomography (CT) played a key role in understanding the internal structure of the two analyzed samples, allowing 3D and sectional reconstructions that enabled a non-destructive evaluation of inclusions and pores based on morphology, frequency, distribution, and density. The results complemented those obtained through thin sections, confirming the presence of a network of predominantly small and uniformly distributed pores, indicating a well-homogenized paste, along with larger pores and inclusions with preferential orientation associated with the direction of hand-forming gestures.

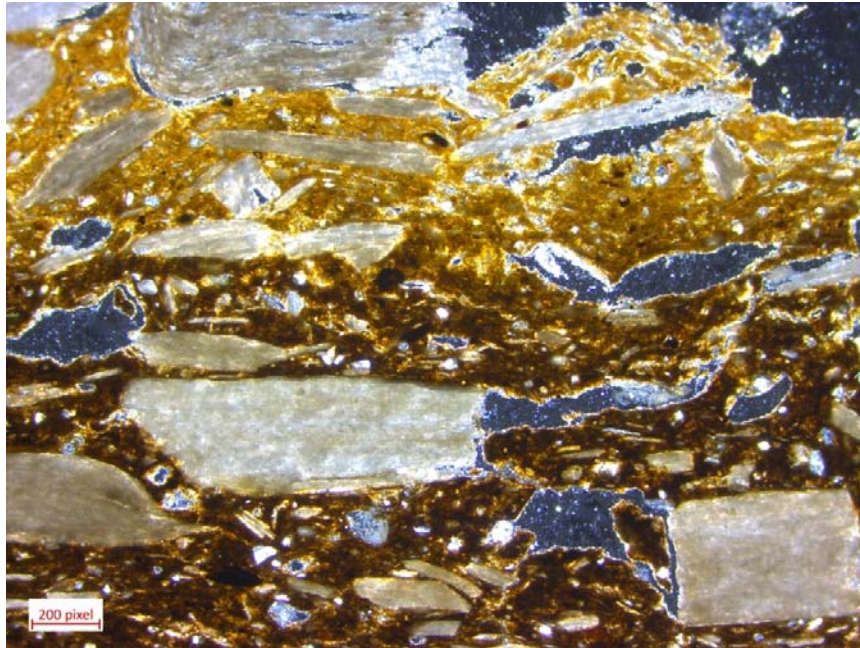


Fig. 3. Example of microscopic view in thin section of sample 002.

The investigations carried out so far on the Săveni–La Movile ceramic material indicate a well-defined technological tradition within the Cernavodă I communities, based on the intentional use of shell as temper, specific hand-forming techniques, and moderate controlled firing.

The next stage of the project aims at selecting a larger, well-contextualized batch of samples that will be analyzed through CT scanning, thin-section petrography, scanning electron microscopy (SEM), portable X-ray fluorescence (pXRF), and experimental archaeology, in order to consolidate these interpretations and gain a more detailed understanding of the relationship between technology and environment in prehistory.

One of the main objectives for the upcoming period is to pay increased attention to identifying the species used as temper in Cernavodă ceramics. Although some shell fragments preserve morphological traits in thin section (growth layers) that may indicate a possible freshwater origin, determining the exact species is difficult and cannot be fully achieved without scanning electron microscopy (SEM). This endeavour has the potential to develop into a methodological study with publishable results in an international journal.

The study of shell materials, both fragmentary and whole, through scanning electron microscopy (SEM) and energy-dispersive X-ray spectroscopy (EDS) has as its main objective the identification of the species used as ceramic temper, their differentiation according to ecological environment (freshwater, brackish, or marine), and the characterization of the assemblage based on the micro-morphological particularities of the analysed fragments or on their chemical profile. At the microstructural level, the analysis will

focus on the multilayered biomineral architecture of the shells, documenting the variability of mineral formations, the microstructure, the lamellar organization, and the growth bands. The studied material will be compared against a reference assemblage.

The semi-quantitative chemical analysis through EDS will investigate the distribution of major and minor elements associated with the mineral matrix, as well as the presence of elements potentially relevant for taxonomic discrimination or for distinguishing particular specimens identified within the ceramic assemblage. The complementary character of the micro-morphological and elemental results may, speculatively, allow the identification of mineralogical and chemical profiles that can differentiate the types of shells used in the ceramic composition.

The sampled assemblage will correlate these results with a collection of modern and/or archaeological specimens serving as a control group, selected based on their proximity to the studied sites and the frequency of their regional archaeological presence, used either as such or experimentally processed (firing, crushing, fracturing). Among the mollusk species of interest for this study are *Unio pictorum*, *Unio crassus*, *Dentalium* sp. (Scaphopoda), and *Planorbarius corneus*.

Activity 1.3 – Documentation and field activities, sampling and laboratory analyses for the reconstruction of paleoeconomy – plants, animals, and physical anthropology

Expected results: database with human and faunal information, database with vegetation information, field and laboratory reports, and statistical data.

Within the bioarchaeology activities, fieldwork campaigns were carried out to complete the carpological, archaeozoological, and anthropological datasets, as well as to collect new samples for analyses specific for this domain (stable isotopes of C/N/H/O, ¹⁴C dating, the industry of hard animal materials, etc.).

Anthracology and carpology. The only archaeobotanical data currently analysed for the Cernavodă I culture come from Hârșova-tell and Gumelnița–Măgura Calomfirești. For now, they are modest, attesting the presence of domestic cereals and legumes at Hârșova, such as hulled wheat (*Triticum aestivum/durum*), barley (*Hordeum vulgare*), einkorn (*Triticum monococcum*), emmer (*Triticum dicoccum*), and lentils (*Lens culinaris*), and of wild spinach (cf. *Chenopodium album*) and cereals (Poaceae) at Gumelnița.

Our analyses regarding plants and vegetation focused mainly on the Săveni site, for collecting new carpological and anthracological samples. In this sense, over 100 litres of sediment were collected from dwelling structures (pit-houses) for flotation and recovery of carpological and anthracological remains. Sediment samples were also collected directly from the investigated features, as well as control sediment samples for sedimentological analyses.

Archaeozoology. Data regarding animal paleoeconomy, diet, or environment are relatively scarce. Six sites have benefited so far from faunal analyses: Cernavodă, Hârșova-tell, Râmnicelu, Pietroasele-Gruiu Dării, Radovanu-Gorgana I, and Săveni-La Movile.

A characteristic feature of the Cernavodă I culture is the strong predominance of large and small ruminants. Pigs are very poorly represented, which would suggest greater mobility of these populations, given the need to feed a large number of cattle requiring pastureslands. Hunting, especially of large animals (red deer and horse) and very large ones (aurochs), played a variable supplementary role in completing the amount of animal-derived food.

Preliminary conclusions point towards the image of an animal-based economy within Cernavodă I communities, dependent on the region in which the site is located, particularly regarding hunting and the ratio between large ruminants (cattle) and small ones (sheep and goats).

During this stage, samples were collected for continuing the archaeozoological study at Chiselet and Săveni. These are currently under analysis.

Special attention should be drawn to the results of the analysis of bivalve remains identified at Săveni. A relatively small number of remains (49) were identified. Surprisingly, 38% (19) of the *Unio crassus* valves exhibit wear traces on their lower edge. Similar analyses conducted elsewhere for determining the origin of such wear have demonstrated that these valves were used as tools (grinders, scrapers) during the manufacture of ceramic vessels. This tendency to make special use of this raw material as a tool aligns with its use as temper in ceramic paste, a specific characteristic of the Cernavodă I culture.

Unio crassus is a species characteristic of well-oxygenated running waters and its presence, with dimensions comparable to those from the Danube, indicates selective gathering, probably aimed at choosing a harder and more resistant support to be used as a tool (Fig. 4). However, it may also indicate an environmental change in the Ialomița Valley at the beginning of the 4th millennium BC compared with the end of the 5th millennium BC. The exclusive presence of this species (if confirmed) suggests the decrease of a surfaces flooded frequently, a lower river discharge but a higher flow velocity, modified characteristics compared to those at the end of the 5th millennium BC, largely as a consequence of marine level rise exceeding 2 m above the present sea level (flooding and wetland formation, reduced water velocity, accentuated sedimentation, etc.).

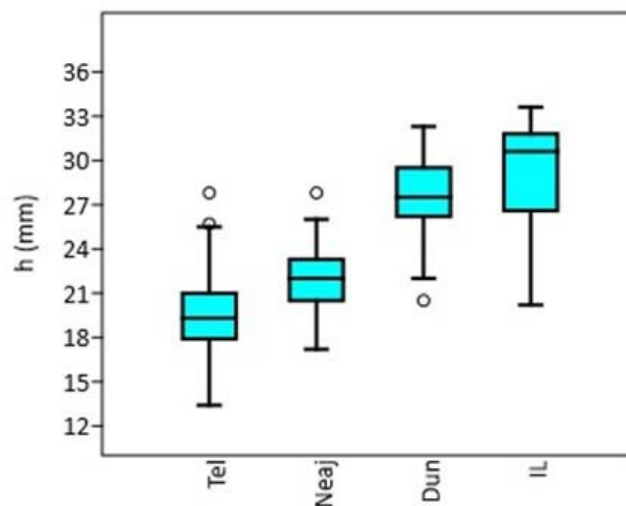


Figure 4. Height (h) of *Unio crassus* valves from various rivers (Tel - Teleorman; Neaj - Neajlov; IL - Ialomița) compared with those from the Danube River (Dun).

The information obtained constituted the foundation for preparing national and international communications (see Activity 1.5 Dissemination).

Physical anthropology

Although the distribution area of the Cernavodă I culture is documented through numerous settlements having their core east of the Lower Danube, from an anthropological perspective, the funerary evidence on the current territory of Romania is, to date, quite limited and, in some cases, contradictory.

Researchers working on the problems of this culture acknowledge, based on relative chronology, several sites with Cernavodă I burials, either tumular or flat (isolated graves or cemeteries), as follows:

- Casimcea (Tulcea County, one tumular grave?);

- Cernavodă (Constanța County, one flat grave);
- Gherăseni-Grindul Cremenea (Buzău County, four graves, extra-muros cemetery);
- Cernavodă (Constanța County, two other isolated graves);
- Agigea (Constanța County, one tumular grave);
- Baia-Hamangia (Tulcea County, one isolated grave);
- Constanța (Anadolchioi neighborhood, one tumular grave);
- Brăila (Brăilița neighborhood, with a variable number of graves, extra-muros cemetery);
- Ostrovul Corbului-Botul Cliuciului (Mehedinți County, 54 graves, extra-muros cemetery);
- Sarichioi (Tulcea County, seven graves, isolated bones, intra-muros graves);
- Sultana-Ghețarie (Călărași County, one grave);
- Chiselet (Călărași County, one grave with three individuals);
- Cernavodă-Dealul Sofia (Constanța County, 11 skeletons, cemetery);
- Orlovka-Kartal (Ukraine, 40 graves).

The absence of absolute dates, however, may lead to inconsistencies between cultural-historical chronology (relative) and radiocarbon chronology (absolute).

A particularly illustrative example is the Brăilița archaeological complex (Brăila County). Archaeological investigations conducted here over more than three decades (1955–1987) revealed multiple prehistoric necropolises, generally grouped under the term “post-Gumelnița necropolises.” N. Harțuche considered them evidence of continuity of habitation and proposed a chronological range extending from the Middle Neolithic to the Middle Ages. A recent interdisciplinary re-evaluation of the Brăilița complex, including anthropological analyses (214 skeletons analysed) and archaeozoological studies, revealed, based on 21 radiocarbon-dated human bone samples, three sequences of use of the funerary area:

- end of the 7th millennium BC and beginning of the 6th millennium BC;
- second half of the 6th millennium BC and beginning of the 5th millennium BC;
- second half of the 4th millennium BC and beginning of the 3rd millennium BC.

Therefore, although archaeologists documented the presence of 125/135 Cernavodă I graves, this sequence is, for now, absent at Brăilița.

For future physical anthropology research, priority will be given to ¹⁴C dating to ensure secure chronological attribution within the Cernavodă I timeframe.

Activity 1.4 – Stable Isotopic Analyses

Expected results: stable isotope database, field and laboratory reports, statistical data.

For the first stage, biological material samples were collected for collagen extraction in order to carry out stable isotope analyses $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$.

Sampling of faunal material for collagen extraction and ¹⁴C dating.

Site	Stable isotopes $\delta^{13}\text{C}/\delta^{15}\text{N}$ (number of samples)	¹⁴ C dating (number of samples)
Săveni	36	3
Gruiu Darii	25	
Sultana	15	
Râmnicelu	10	
Radovanu	16	2
Hârșova	16	3
Total	118	8

Within the stable isotope investigations, preliminary processing of $\delta^{13}\text{C}/\delta^{15}\text{N}$ data from the Săveni and Sultana sites was carried out.

The preliminary data indicates a change in the diet of ruminants compared to the Gumelnița period. In the Cernavodă I phase, they fed on plants from more varied species, suggesting greater mobility than in the previous period, when animals were kept in pens or restricted to pasturelands along river valleys.

The isotopic data will be the subject of a Web of Science article, to be submitted in 2026.

Activity 1.5 - Dissemination and valorization

Expected results - 3 presentations at national or international conferences.

Within this activity, the BioArhSteppe project team delivered one (1) presentation at conferences organized abroad and two in Romania (2). Also, one (1) article has been submitted to a Web of Science indexed journal. The basic principles of the project were also supported by organizing a summer school, a round table/workshop event, and a session at a conference.

International Conferences

1. 13th Scientific Conference Methodology and Archaeometry, 27–28 November 2025 at the Faculty of Humanities and Social Sciences, University of Zagreb.
Bogdan Manea, Valentin Radu, Daniela Dimofte, Ioana Poroșnicu, Adrian Sima, Florin Vlad, Ion Tiseanu & Cătălin Lazăr
Born by Nature, Shaped by Man: Archaeometric Insights into Shell-Tempered Chalcolithic Pottery from Săveni-La Movile

National Conferences:

2. PONTICA International Scientific Session, 58th Edition: „History and Archaeology in the West-Pontic Area”, organized by the Museum of National History and Archaeology Constanța, Constanța, September 25-27, 2025.
Radu Valentin, Bogdan Manea, Florin Vlad, Adrian Bălășescu
Mollusks and Ceramics. An analysis of the Cernavodă I materials discovered at the archaeological site of Săveni-La Movile.
3. “Archaeological and Numismatic Research” Symposium, 11th edition, in memoriam Eugen Nicolae, organized by Bucharest Municipality Museum, “Vasile Pârvan” Institute of Archaeology of the Romanian Academy & the Romanian Academy Library, Bucharest, 18-19 September 2025.
Cătălin Lazăr, Theodor Ignat, Adelina Darie, Cristian Roth, Cosmin Moise, Marian Voicu, Sebastian Dumitrescu, Cristian Grosu, Bogdan Manea, Adrian Șerbănescu, Mihai Florea, Cristina Covătaru, Cornelis Stal.
Radiography of a prehistoric necropolis: Sultana–Valea Orbului (1974–2025).

Articles (submitted)

1. Ana García-Vázquez, Mihaela Golea, Gabriela Sava, Tiberiu Sava, Cătălin Lazăr
Restitutio ab initio: Direct dating and isotopic evidence for assessing the proxy value of intrusive archaeobotanical ecofacts in archaeological contexts. *Journal of Archaeological Method and Theory* (submitted)

Other Events

- i. ArchaeoSciences 2025 Summer School “Zooarchaeology & Anthropology”, 21–24 July 2025, Sultana, Romania. Organizers (project members): Adrian Bălășescu, Gabriel Vasile (IAB-AR) & Valentin Radu (University of Bucharest). <https://icub.unibuc.ro/scoala-de-vara-archaeosciences-2025-cu-tema-zooarheologie-antropologie-a-avut-loc-la-situl-arheologic-de-la-sultana/>. The main goal of the

ArchaeoSciences 2025 Summer School was to provide students and young researchers with hands-on training in the fields of zooarchaeology and physical anthropology. Through practical workshops and case studies, the event aimed to teach participants essential methodologies for the analysis of faunal and human remains. The school sought to develop skills in reconstructing animal economies, bioanthropological profiles, and aspects such as bone pathologies. Ultimately, the goal was to strengthen an interdisciplinary understanding of prehistoric communities in southeastern Romania.

- ii. DOMINO–CLIMATE Romania Workshop, 22–23 October 2025, Bucharest, University of Bucharest (Romania) & Eötvös Loránd University (ELTE), Budapest (Hungary). Organizers: Valentin Radu & Cătălin Lazăr (University of Bucharest). <https://icub.unibuc.ro/workshop-stiintific-domino-climate-organizat-la-universitatea-din-bucuresti/>. The main goal of the workshop was to correlate and synthesize paleoclimatic, paleoecological and archaeological data from southeastern Romania associated with the Eneolithic. The event aims to prepare a joint scientific article authored by the Romanian and Hungarian teams through rigorous integration of preliminary results. Key objectives include the harmonization of chrono-stratigraphy and radiocarbon data, as well as the creation of a unified regional archive. Ultimately, the workshop sought to consolidate an interdisciplinary perspective on human–environment dynamics during 4500–3600 BC. The participation of the project members consisted of presenting research results and contributing to improving the descriptions of archaeological and archaeozoological contexts to complete the information intended for publication.
- iii. Organization of Session S215, 31st EAA Annual Meeting (Belgrade Virtual, 2025) “Around the Black Sea: Migrations and Mobility through Plains, Mountains and Sea in the Early Holocene (c. 10,000–4,000 BC)”. Organizers: Marta Andriiovych (University of Oxford) & Cătălin Lazăr (University of Bucharest). https://drive.google.com/file/d/19g-L_xwY2gCXwc_F_Y0jdkm8t-H7_aHO/view?pli=1. The main goal of the session was to analyze the interaction between environmental, climatic, and cultural factors that shaped the resilience and mobility of prehistoric communities in the Black Sea region. It aimed to examine how diverse landscapes and major climatic events influenced the spread of agriculture and pastoralism since the Neolithic. The subjects discussed covered a wide range, from paleoenvironmental and genetic investigations to studies on seasonal migrations and cultural exchanges. The session brought together contributions from various fields to better understand human dynamics and the spread of innovations in the early and middle Holocene.

IMPACT OF THE PROJECT IN STAGE I OF 2025

The expected impact in stage I/2025 targeted, in particular, the national and international scientific community as well as the university environment.

The principle of *excellence* was a priority for the project team, the aim being to increase the visibility of the research conducted by the members involved, both nationally and internationally. The principle of *dissemination*, closely related to the previous one, was achieved through the effort to publish the research results in field journals, indexed by ISI or BDI/ERIH (submitted 1 article). This last principle also includes the series of scientific communications (3) presented at various international (1) and national (2) events in the field, as well as the participation in organizing a session at a conference (1), together with the summer school (1) and the round table/workshop (1), where the project team coordinated the events, presented lectures, and disseminated the first results.

CONCLUSIONS

In stage I of the project *Primele populatii stepice nord-pontice in Balcani. O perspectivă bioarheologică a comunităților Cernavodă I din bazinul Dunării de Jos (Romania) / First North Pontic Steppe Populations in the Balkans. A bioarchaeological outlook of Cernavodă I communities in the Lower Danube Basin (Romania)*, (BioArhSteppe), nr. PN-IV-P1-PCE-2023-1899, contract nr.77PCE/2025, implemented by the University of Bucharest, all the proposed objectives were achieved, a fact fully reflected by the result indicators obtained, following the principles of excellence and dissemination.

Project Director
Radu Valentin