ALEXANDRU IOAN CUZA
UNIVERSITY of IAȘI

ARHEOINVEST CENTER



ARCHAEO CALENDAR 2020

Interdisciplinary Research Institute
Science Department
Arheoinvest Center

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The 'treasure' of ritual objects from Isaiia–Balta Popii (Iași County)

At Isaiia, in 1998, in the newest phase of the dwelling no. 1 (dated to the turn of Precucuteni phases II and III), near the fireplace, a significant assemblage of ritual objects was discovered, enclosed in a clay container. The container, of an unusual shape for the Precucuteni culture – a round box, with almost vertical walls, flat bottom and suddenly narrowed mouth – sheltered 21 female anthropomorphic statuettes, 13 chairs / miniature thrones, 21 cones of clay pierced vertically only at the sharp end, 21 round beads, partially perforated, 42 fully perforated beads and a piece of conical-pyramidal shape.

All statuettes and chairs show particularities of shaping and decorating. It is worthy to note that, as the case of Poduri, 15 statuettes were decorated – this time with incisions. Also, on two chairs clear symbolic signs were drawn. The 21 cones and 21 partially perforated beads probably composed, by joining using wooden rods, the same number of stylized phallic representations, as symbol of masculinity. The repetition of the number 21, for the statuettes and for the composite pieces could mean an association between a female figurine and a male representation. Attention is retained also by the completely perforated beads, which probably formed a necklace, in number of 42 (which is twice of 21). The 21 statuettes probably constituted either a kind of goddesses' pantheon of the precucutenian world (maybe with a wider territorial extension) or instances of the Great Goddess, to which is added the stylized acolytes' male representations (the horns of the chairs and the schematic phallic representations). The repetition of numbers with ancient symbolic meanings (21, 13, 15 and so on) in the composition of assemblages from Poduri and Isaiia could indicate the existence of a magic of numbers, known and practiced in religious ceremonies by the Precucuteni communities.

The 'treasure' of Isaiia constituted the central piece of several exhibitions dedicated to prehistoric art and religion, in Romania and abroad (Olten, Switzerland in 2008; Bytom and Warsaw, Poland in 2009). Currently, it is exhibited at the Museum of the Cucuteni Civilization within the Museum of the University "Alexandru Ioan Cuza" in Iași.

Felix-Adrian Tencariu

Figures

Cover: The "Treasure" of ritual objects from Isaiia–*Balta Popii* (Iași County),

Left: Exhibition room from the Museum of the Cucuteni Civilization from the "Alexandru Ioan Cuza" University of Iași

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Archaeo Calendar 2020

This calendar presents some of the research directions and scientific outputs of the Arheoinvest Center from the "Al. I. Cuza" University of Iași. We intend it to be a solid approach of our Center towards **public archeology** — the necessary practice to engage the public in the archaeological research by presenting data and interpretations of that data in an accessible way without altering its scientific quality.

The displayed items represent initiatives of the members of the Center, but most of them are the result of interdisciplinary endeavors of some teams of researchers (as indicated by the references), both from the University and outside.



Editors: Dr. Andrei Asăndulesei, Dr. Felix-Adrian Tencariu, Ștefan Caliniuc.

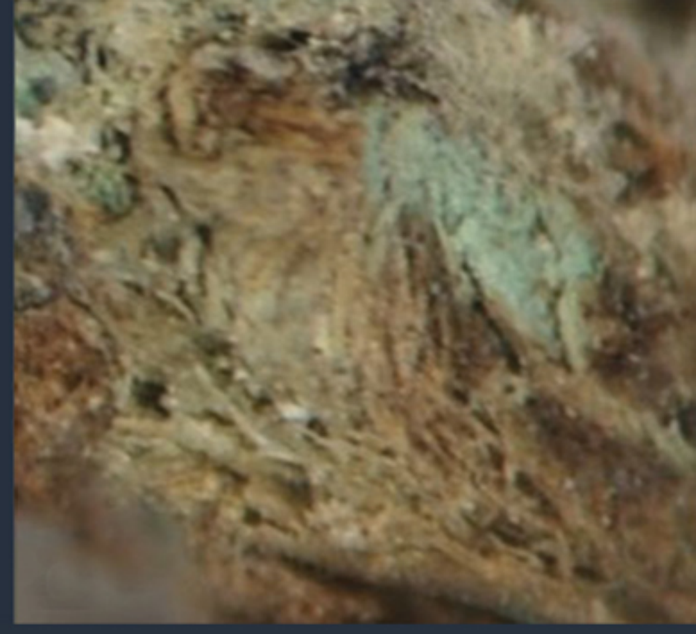
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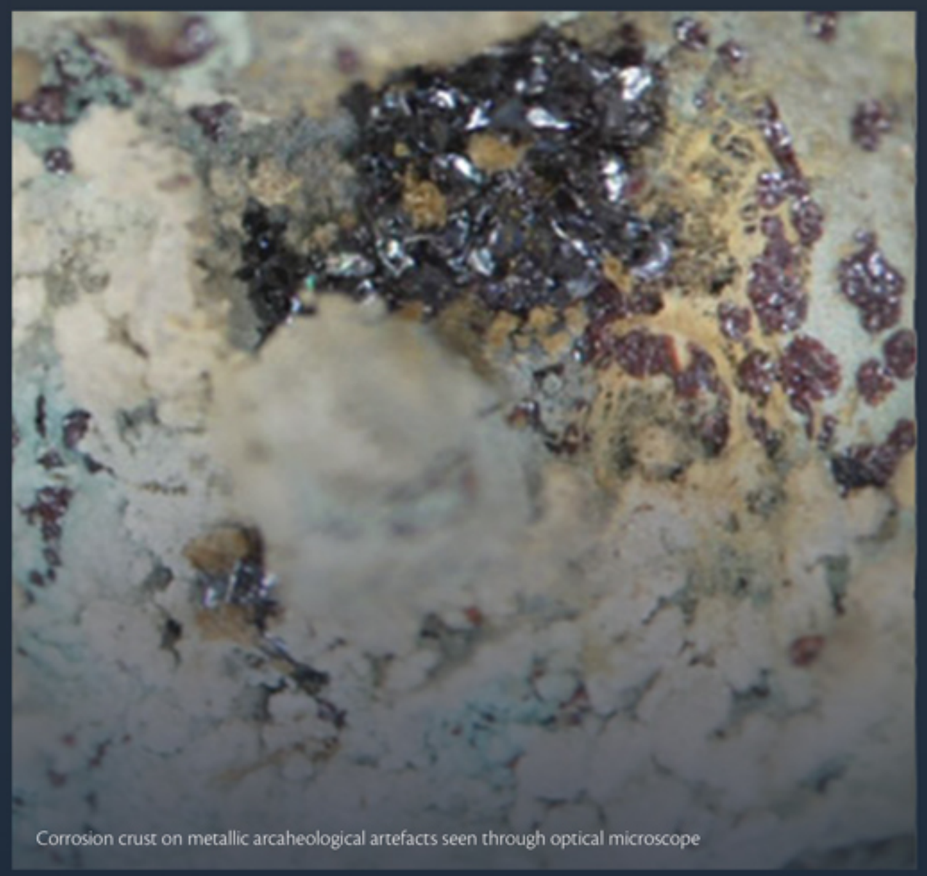
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Corrosion crust on metallic arcaheological artefacts seen through optical microscope

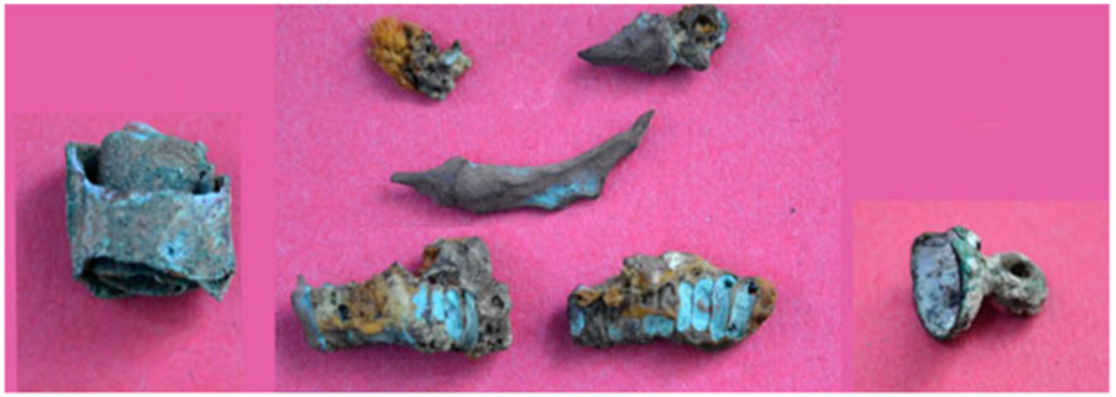


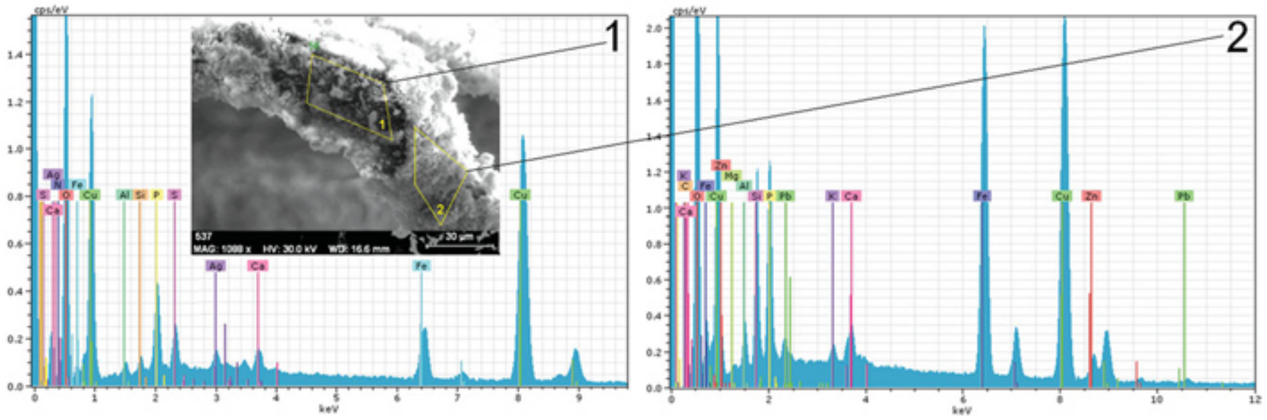
2020

01

JANUARY

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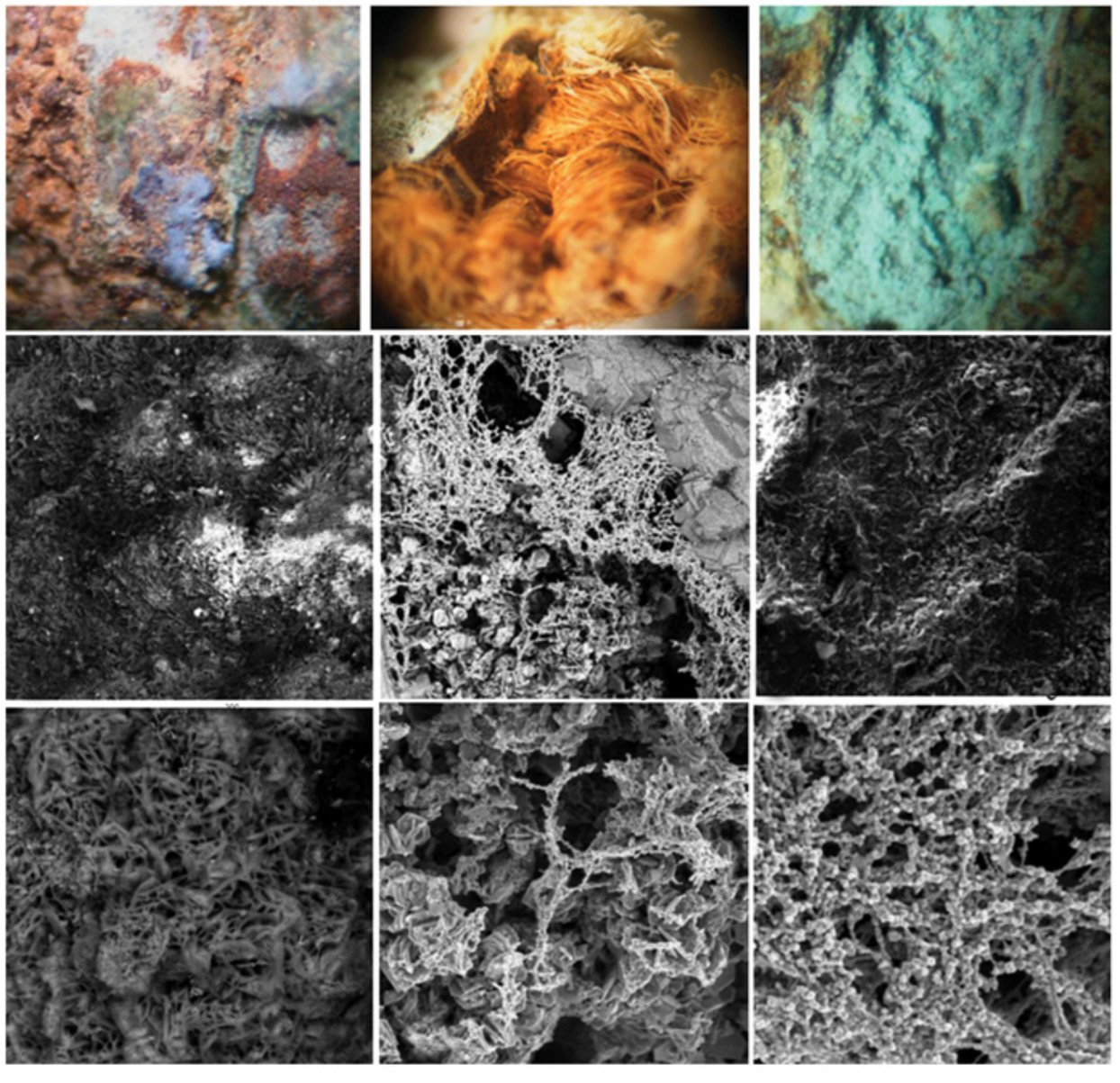


Alteration Processes of Copper Alloy Artifacts

The bronze objects discovered in archaeological excavations constitute a large and complex study material for highlighting the conservation status and identifying the types of chemical degradation and physical damage from during underground laying. This case study presents the evolution of the underground degradation of copper alloys (2nd–3rd Century A.D.), by analysing both the corrosion crust and the metallic core, which led to the determination of the composition of some atypical structures, formed during the underground stay. By using noninvasive techniques, such as OM, SEM-EDX and X-ray Fluorescent Spectrometry, both the surface structured and the ones from fractures or cracks of the corrosion crusts, we analysed a series of characteristics (their chemical nature, the structure distribution, size, and morphology) that allowed us to establish the main contexts between the abandonment phase and the discovery.

The results indicate that the three artefacts are made of copper alloys elaborated from polysulphides ore, because in the pieces composition, besides the basic elements, Cu and Sn, were identified also other alloying elements, such as: Pb, Zn, Fe, Ag, and S. After casting as ingot the objects were forged and polished, except the button, which was only cast. In the corrosion crust, next to the alloy elements were identified elements coming from all the patinas (primary, secondary and tertiary or contamination).

Viorica Vasilache



Figures

Top-left: Copper pendant (fragmented), fibula (fragmented) and globular button

Top-right: EDX spectrums of the samples

RIght: Corrosion crusts and SEM images

References

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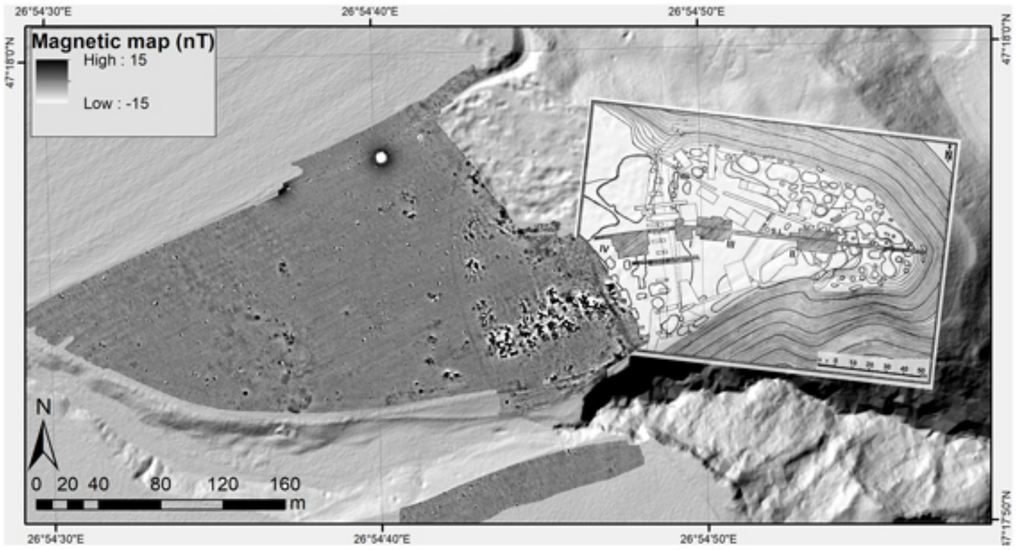
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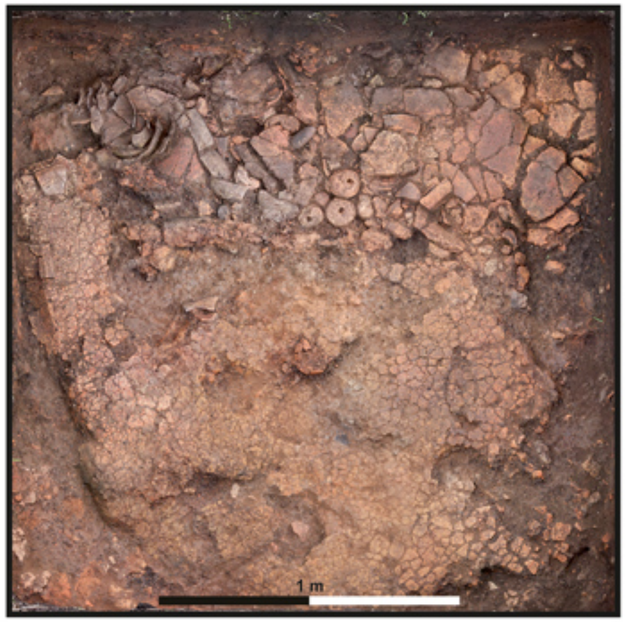


Cucuteni–*Cetățuie*, the typesite of the "last great civilisation of Old Europe"

2020
02
FEBRUARY

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Back to the roots. Rediscovering Cucuteni–*Cetățuie*

In 1884, at 50 km from Iasi, the archaeological site of Cucuteni–*Cetățuie* (Iași County) was discovered, which was to become one of the eponymous settlements of the most renowned prehistoric civilizations in Europe — Cucuteni-Trypillia. The archaeological investigations carried out since its discovery have focused only on the prominent part of the terrain (the Cetățuie itself).

Since 2016, more than 50 years after the last archaeological excavations in this renowned site, Arheoinvest resumed the investigations also by means of non-destructive and high-resolution ground-based geophysical and airborne sensing techniques. They revealed the existence of a much different planimetry than what was known until now. It seems that the tip of the promontory constituted the initial nucleus of the settlement, which probably developed to the west in several stages.

The test trench excavated in late November 2017 was intended to partially frame chronologically the extension of the eponymous settlement from Cetățuie. For this purpose, we have partially investigated a section (S I – 2×2 m), located at the center of a magnetic rectangular anomaly which suggested a typical Cucuteni burned dwelling. Our endeavor documented the existence of a habitation area much larger than the one that was researched fifty years ago, with many new interesting archaeological situations (double fortifications, dwellings, possible kilns).

Andrei Asăndulesei & Felix-Adrian Tencariu



Figures

Top-left: Magnetic map and old excavation plan overlaid on LiDAR hillshade model

Top-center: Orthophotograph of the recent excavation

Right: Finds from the 2017 archaeological campaign

References

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Traditional supplying with brine for cheese making from the salt water spring of Båsceni (Buzău County)

2020
03
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Ethnoarchaeology — The Archaeology of Living Communities

Ethnoarchaeology is the study of the contemporary material culture and its relations with human behaviour and social organization for the benefit of archaeology. The rich details and the amazing variability of the living culture could invigorate the analogical thought of the archaeologist, offering a chance to avoid platitudes, superficial conclusions or "inherited", preconceived ideas about different archaeological issues. The members of the Arheoinvest Center have led or been involved in research projects concerning ceramic ethnoarchaeology and ethnoarchaeology of salt.

The ethnoarchaeological research on ceramic production and technology focused on the traditional potter's craft in Moldavia. 18 potters in 11 localities (only five still working) were identified and extensively interviewed. The project gathered useful information about learning and transmitting knowledge, context of ceramic production and distribution, technology, rituals, beliefs and prohibitions related to the potter's craft. This data and the models of production/distribution resulted could stand, besides dozens of such approaches from all over the world, as reference resources for cross-cultural correlations necessary for interpreting the past.

The Arheoinvest members involved within the ethnoarchaeology of salt research projects aid special attention to the following items: identification and geo-referential localization of the salt springs and salt outcrops through GPS; complex ethnographic inquiries related to them salt, performed at the salt springs and salt outcrops, at the seasonal animal breeding settlements, and at exploiting localities; spatial analysis method applied to the distribution area of the salt coming from a salt spring or a salt outcrops– habitat implementation relationship; quasi-exhaustive inventory of salt related onomastics. The high density of salt water springs and salt mountains around the Romanian Carpathians and the very intense human reaction to salt resources nowadays, offers the opportunity to fully substantiate interpretative models impossible to achieve anywhere else in Europe.

Felix-Adrian Tencariu & Mihaela Asăndulesei







Figures

Top: Pottery drying on the veranda — the workshop of Dumitru Bacinschi, potter from Schitu Stavnic (Iași County)

Right-center: Fănel Bucăluță (10 y.o.), holding a massive piece of salt rock, extracted by him and his father from the Țipău outcrop (Vrancea County)

Right: : The potter Arcadie Pașcaniuc and its workshop (Marginea, Suceava County)

Right-bottom: Getting information about traditional salt rock exploitation from local sphepherd near the Cerbu outcrop (Vrancea County)

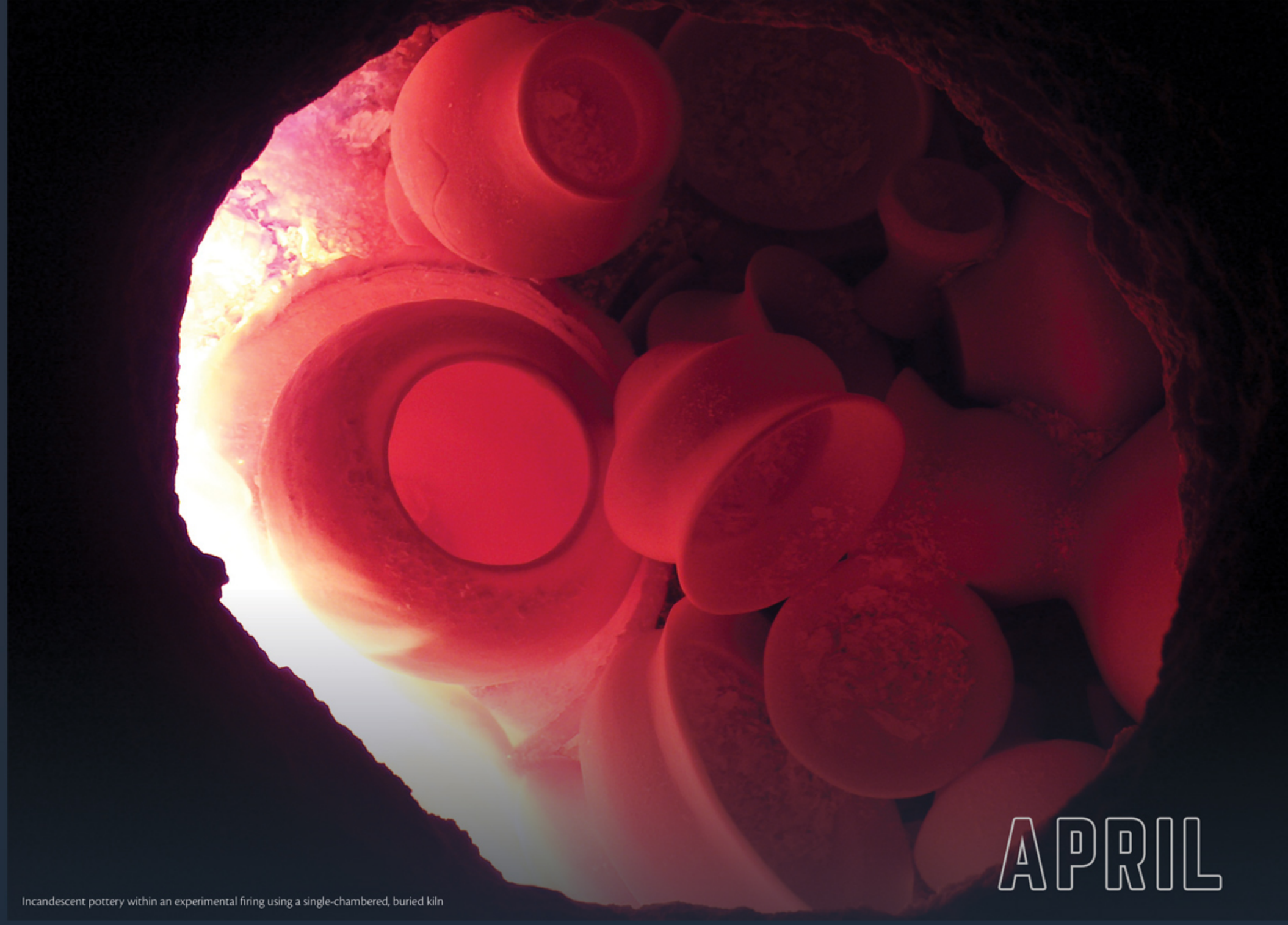
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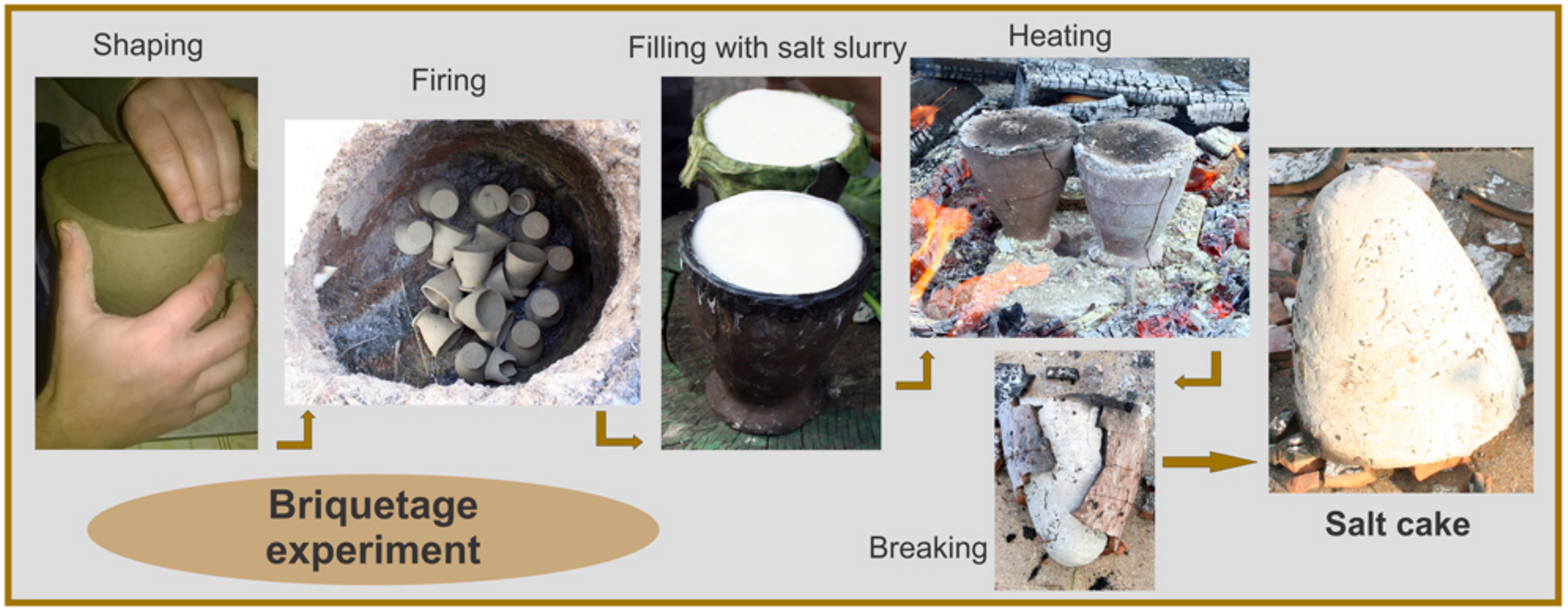
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Incandescent pottery within an experimental firing using a single-chambered, buried kiln

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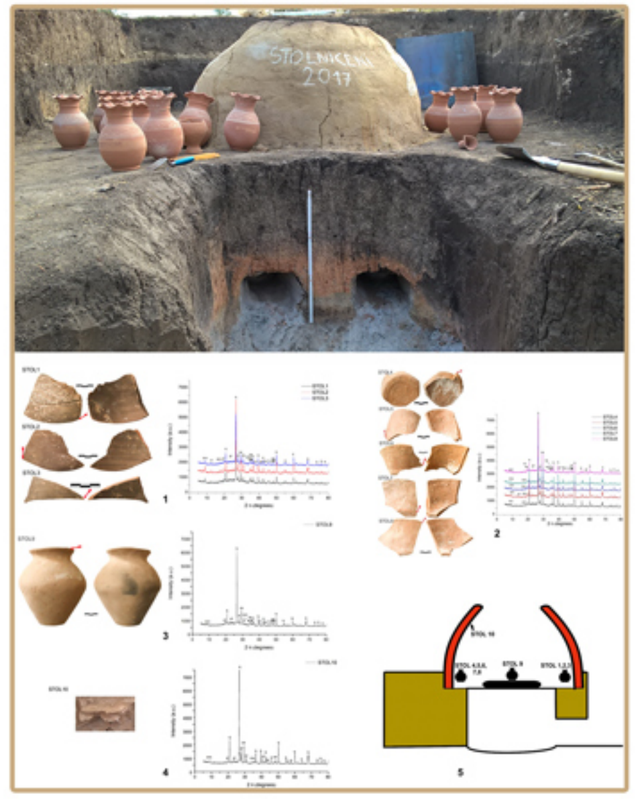




Experimental Archaeology

The experiment, in its general sense of a procedure applied to verify a hypothesis, is the foundation of modern science. In archaeology also, the experiment surpassed a long-time ago the status of a hobby or weekend occupation, becoming an integral part of the archaeological science. In the case of the archaeological experiment, a valid hypothesis (or more, for the same subject of experimentation) is a premise, which, based on archaeological data from whom the experiment started, and others, if available (ethnoarchaeology, for example) can be part of an inferential process about a prehistoric object, technology or behaviour.

Within Arheoinvest, the archaeological experiments focused on testing prehistoric firing installations (kilns) and verifying hypothesis regarding the ancient technique of obtaining solid salt out of natural brine. The experiments allowed some valuable observations on distinct aspects of these operational chains: modelling pottery; efficiency of several firing installations (in terms of temperature evolution vs. time, fuel consumption, breakage rate); ways of making salt cakes through exposure to fire of clay recipients filled with brine or a salt slurry of varied concentrations (the amount of time needed for crystallization and hardening of the salt, techniques of extracting the salt cakes from the ceramic coat); assessment of the effort (i.e. labour and raw materials) involved by the whole processes. All the failures, challenges and eventual successes encountered during the experiments granted insights into these ancient techniques, described mainly a priori in the archaeological literature.



Figures

Top: Field experiments concerning the prehistoric production of salt cakes through brine evaporation, using ceramic vessels known as briquetages.

Top-right: Open firing, using light fuels (twigs, straws, dry cow dung) with multiple measurements of the reached temperatures.

Right: Experimental pottery firing in a replica of an exceptional two-chambered updraft kiln (late Cucuteni-Trypillia culture) discovered in Stolniceni (Edineț County, R. of Moldova) and X-ray diffraction analysis of several samples for the estimation of the firing temperatures.

Felix-Adrian Tencariu

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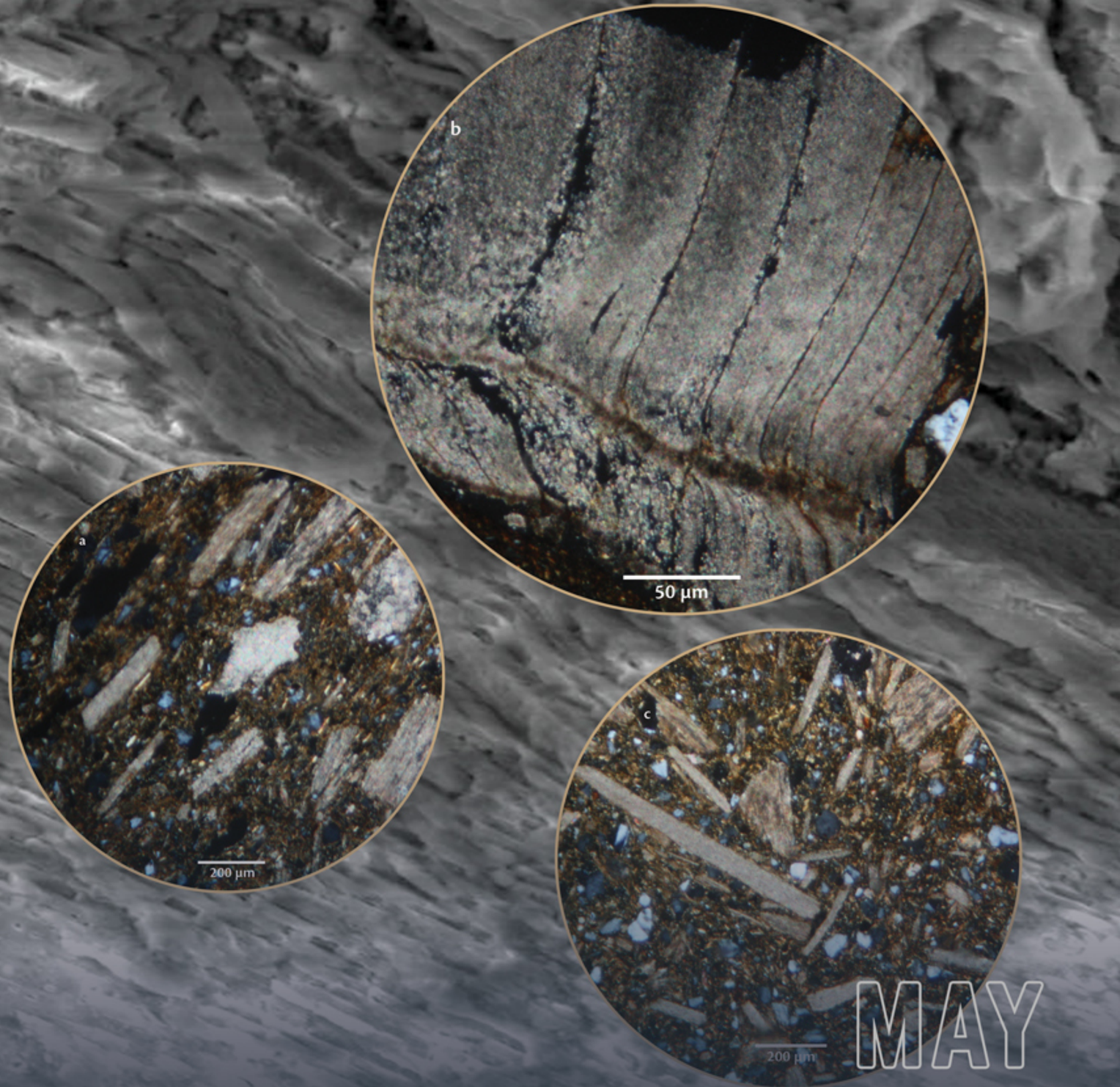
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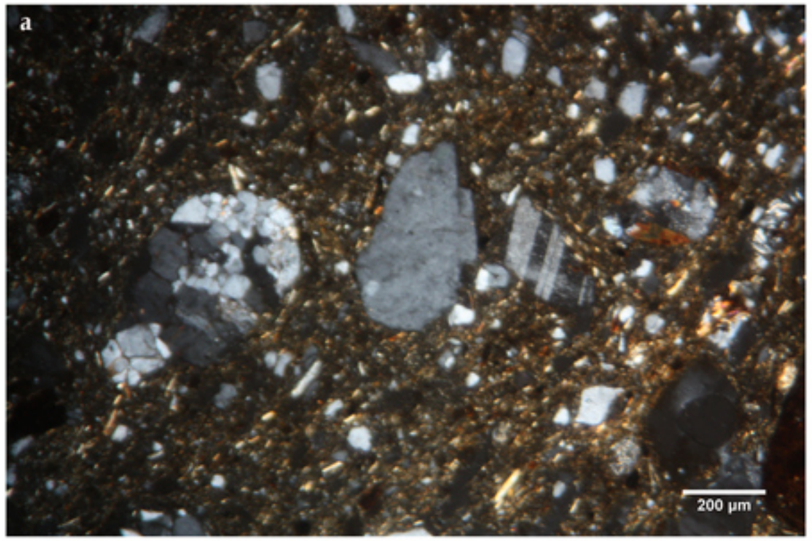


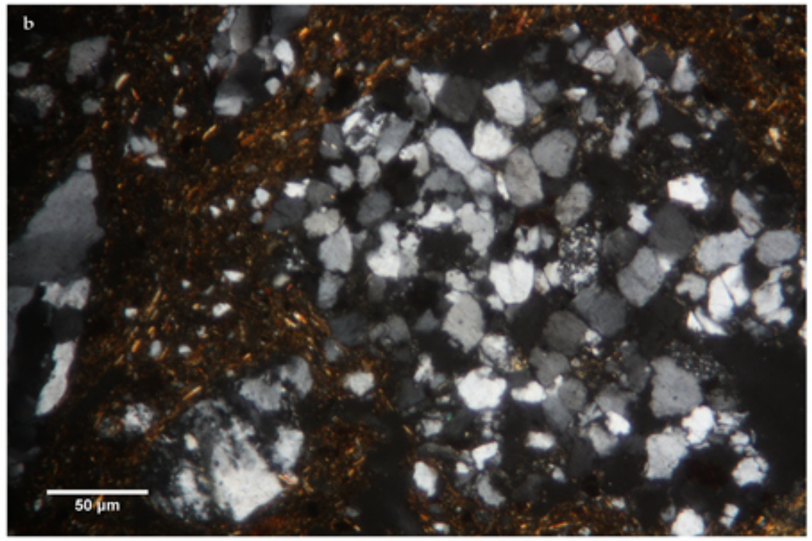
Microphotos of Cucuteni C pottery

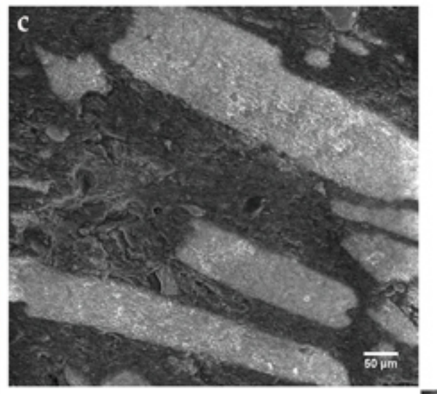


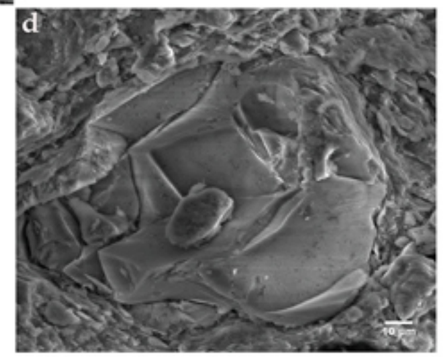
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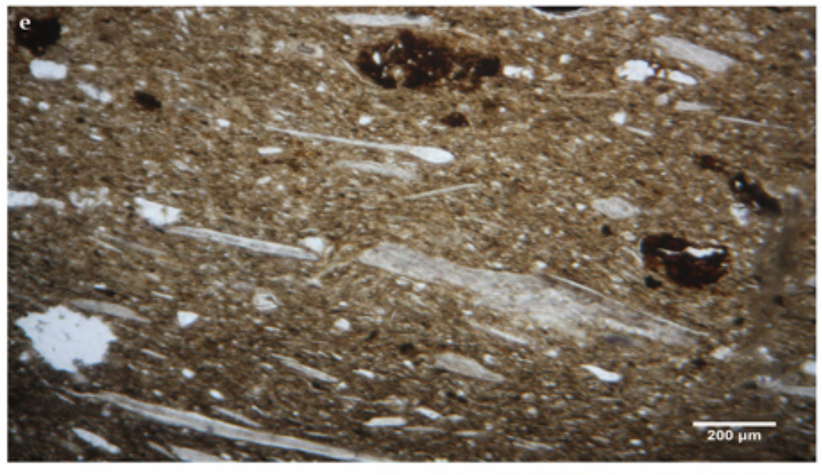
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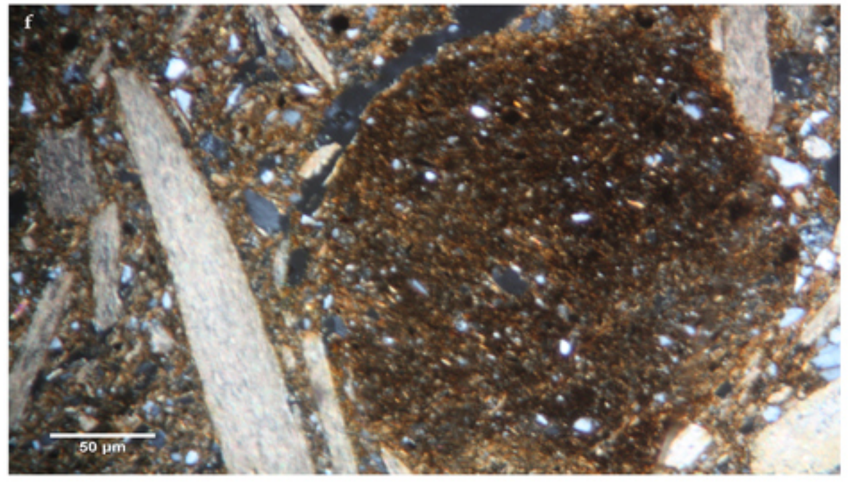












Technological features of the Cucuteni C pottery from eastern Romania

The Cucuteni C ware has attracted scholars for more than eight decades due to its specific decorative patterns and paste composition in comparison with the Cucuteni painted ceramics. C-type pottery existed for about 800 years, during Cucuteni A3-B2 stages (4300–3500 cal BC), being more frequent in the Cucuteni B sites. Because this ceramic is commonly believed to be an intrusive element in the Cucuteni tableware, it is important to determine its main technological characteristics before making any assumptions on its possible origin. The history, nature and extent of the regional and local variations cannot be investigated based only on stylistic and typological analysis.

The archaeometrical analysis performed on the Cucuteni C ware from Văleni – *Cetățuia* (Neamț County), Piatra Șoimului – *Horodiștea* (Neamț County), Gârcina – *Slatina Cozla II-III* (Neamț County) and Poduri – *Dealul Ghindaru* (Bacău County) have revealed the use of similar type of clay. This could be the result of functional and economic necessities due to their specific quality or because of their higher availability within the landscape. Further, they can indicate inter-generational exploitation of raw materials, reiterating symbolic contacts among members of the community. The microstructural and mineralogical analysis prompts to the existence of multiple recipes in the paste preparation and a continuous experimentation with a wide range of firing regimes.

Florica Mățău

Figures

Top: Polarized light microphotos of Cucuteni C pottery samples from Văleni (a, b), Gârcina (e) and Piatra Șoimului (f) showing the use of distinctive types of temper recipes – with sandstones for the Văleni samples and with various amounts of shells for the samples selected from Gârcina and Piatra Șoimului (Images a, b, f are with crossed polarizers and image e is with plane polarizers (a, c at 4×, b, f at 20×))

Right: SEM images for the shell tempered (c) and grog tempered (d) ware identified at Poduri

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Aerial view of site no. 4 (Săucești, Bacău County), with multipe archaeological complexes investigated

2020
06
JUNE

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Preventive Archaeology for infrastructural works

The archaeological investigations (the preliminary diagnosis, preventive excavations, and subsequent archaeological supervision) carried out on the site no. 4 (Săucești, Bacău county) had as main objective the archaeological discharge of the Bacău beltway. The structures, complexes, artefacts or ecofacts from the perimeter affected by the project were discovered, recorded and studied. Thus, it was possible to determine the features of the site, the chronological frame of its evolution, as well as its integration in the historical evolution of the broader area. The archaeological excavations led to the identification and study of a very intense occupation of the natural mound from the common alluvial plain of Siret and Bistrita, due first of all to its elevation which offered protection against (probably) the frequent reverses of the two important rivers. This high habitation density is reflected by the large number of archaeological complexes investigated — 392 in the 2016 campaign, respectively 537 in the 2019 campaign.

Domestic or borrowing pits (clay), special pits (with animal or human skeletons inside), buried houses (cottages), domestic ovens outside the dwellings, cremation graves, burial graves, various modern and contemporary structures etc. have been identified and investigated. Thousands of fragmentary artifacts were discovered and analyzed, such as pottery (mainly), glass and metal containers, tools made of stone, ceramics and metal, metal weapons (spear tips and arrows); jewelry made of bone, ceramics, glass and metal etc. Chronologically, the structures and artefacts belong mainly to the 5th / 4th centuries BC – 4th century AD: The Geto-Dacian La Tene, the Carpic culture (predominantly), the Sântana de Mureș culture. Less numerous vestiges date from the late Bronze Age and the early Iron Age, some complexes (and the burial necropolis) from the early Middle Ages and a number of complexes belong to the modern and contemporary periods.

Felix-Adrian Tencariu & Casandra Brașoveanu



Figures

Top-left: Domestic buried oven (2nd–4th century AD)

Top-center: Medieval inhumation graves

Top-right: Cremation grave (6th–5th century BC)

Right: Bone hairpin (2nd–4th century AD)

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The Chalcolithic site of Isaiia–*Balta Popii*

2020
07
JULY

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The Chalcolithic site of Isaiia–*Balta Popii*

The archaeological site Isaiia–*Balta Popii* is located in the south-eastern sector of Răducăneni commune in Iași County (eastern Romania) on a small terrace of the Pruth River. The stratigraphy of the site is quite complex, so far being discovered vestiges of the following periods: the modern era – pottery kiln; the early medieval period – a few archaeological complexes of the Răducăneni culture; 2nd century AD – sarmatic tombs; early Iron Age – a buried dwelling and pottery of the Corlăteni-Chișinău culture); Bronze Age – two early bronze age tombs, middle and late bronze age pottery fragments); the Eneolithic period – the Precucuteni culture settlement; the Neolithic period – two buried dwellings and scattered ceramic fragments belonging to the LBK culture.

The Early Chalcolithic habitation, through the complexes of the Precucuteni culture (phases II and III), is the the richest and longest habitation of the site. The radiocarbon data indicate that the settlement existed sometime around 5680 ± 40 B.P. (4618–4446 cal. B.C.) / 5660 ± 40 BP (4592–4438 cal. B.C.). So far, eleven dwellings and over 60 pits belonging to this culture were investigated. Regarding the archaeological materials, inside the house were found typical chalcolithic categories of artefacts: ceramic recipients, clay figurines, knapped and polished stone tools etc. The multiple discoveries of various assemblages and objects cult-related could indicate that the inhabitants, beyond practicing worship in collective ceremonies, held in a common space (the sanctuary) on certain occasions, also had a daily religious life, in their own home, with rituals deployed especially around the hearths and ovens.

Felix-Adrian Tencariu & Andrei Asăndulesei

Figures

Top-left: Excavation of dwelling no. 5 from Isaiia.

Top-center: Aerial image of the dwelling no. 14 from Isaiia

Top-right: Precucuteni pottery

Right: Special finds

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The rock-salt mountain from Mânzălești, Buzău County

2020
08
AUGUST

SA	SU	MO	TU	WE	TH	FR	SA	SU	MO	TU	WE	TH	FR	SA	SU	MO	TU	WE	TH	FR	SA	SU	MO	TU	WE	TH	FR	SA	SU	MO
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LANDSCAPES OF SALT

Both the sub- and inner-Carpathian areas of Romania have the highest potential of Europe for ethnoarchaeological research on the preindustrial civilisation of salt. These areas harbours some of the most representative and best preserved European archaeological sites related to the continuous exploitation of rock salt and salt-spring brine since the early Neolithic until present. Romania is the only European country in which such practices still occur.

Archaeological investigations revealed different prehistoric techniques of salt exploitation. Aside from this, the living communities adjacent the resources still maintain traditional behaviours related to the exploitation of salt springs and salt outcrops. An ethnoarchaeological investigation of this still living phenomenon creates the premises for a complex understanding of the exploitation of salt in pre- and proto-history, opening new lines of interpretation and issuing new hypotheses.

Three recent research projects coordinated by professor Marius Alexianu from "Alexandru Ioan Cuza" University (*ethnosal.uaic.ro*) had the central scope to produce a complete ethnoarchaeological referential on salt, based on complex interdisciplinary research.

Recording the dynamic present-day saltscapes by airborne sensing techniques had the scope to document the unique moments for the continuously changing salt resources landscape in order to capitalise the ethnoarchaeological potential.

Mihaela Asăndulesei & Ștefan Caliniuc





FIGURES

Top: Aerial view of the rock-salt outcrop from Cerbu–*Sarea roșie* (Vrancea County)

Right-middle: Salt quarry from Cerbu–*Sarea roșie*

Right-bottom: Aerial view of the salt spring from Țolici–*Hălăbutoaia*

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Burning of replicas of Cucutenian dwellings

2020
09
SEPTEMBER

TU	WE	TH	FR	SA	SU	MO	TU	WE	TH	FR	SA	SU	MO	TU	WE	TH	FR	SA	SU	MO	TU	WE	TH	FR	SA	SU	MO	TU	WE
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Experimental Archaeology — The burning of Cucutenian houses

The Chalcolithic Cucuteni culture is noteworthy also because of the peculiar practice of voluntary burning dwellings. In order to understand this phenomenon, we carried out combustion experiments on several types of dwellings specific to the Cucuteni culture. In all, four dwellings were burned, two as "accidents" without additional fuel, and two on purpose, with addition of fuel, in the form of firewood. It was concluded that the "accidental" burning did not result in a degree of fire-hardening similar to the one found within the archaeological excavations, while the intentional firing led to an intense fire-hardening of the walls, the daub being transformed into a brick-like material, similar to the one uncovered on the archaeological sites. These results showed that during the Chalcolithic, dwellings were probably burned on purpose, with the addition of fuel (firewood), the burning having a ritual character.

Vasile Cotiugă & Radu-Ștefan Balaur

Figures

Top: Reeneactment of Chacolithic daily life (Cucuteni Archaeological Park)

Top-right: Inside a reconstructed Cucuteni house

Right: Detail of the remains of the burned dwelling

References

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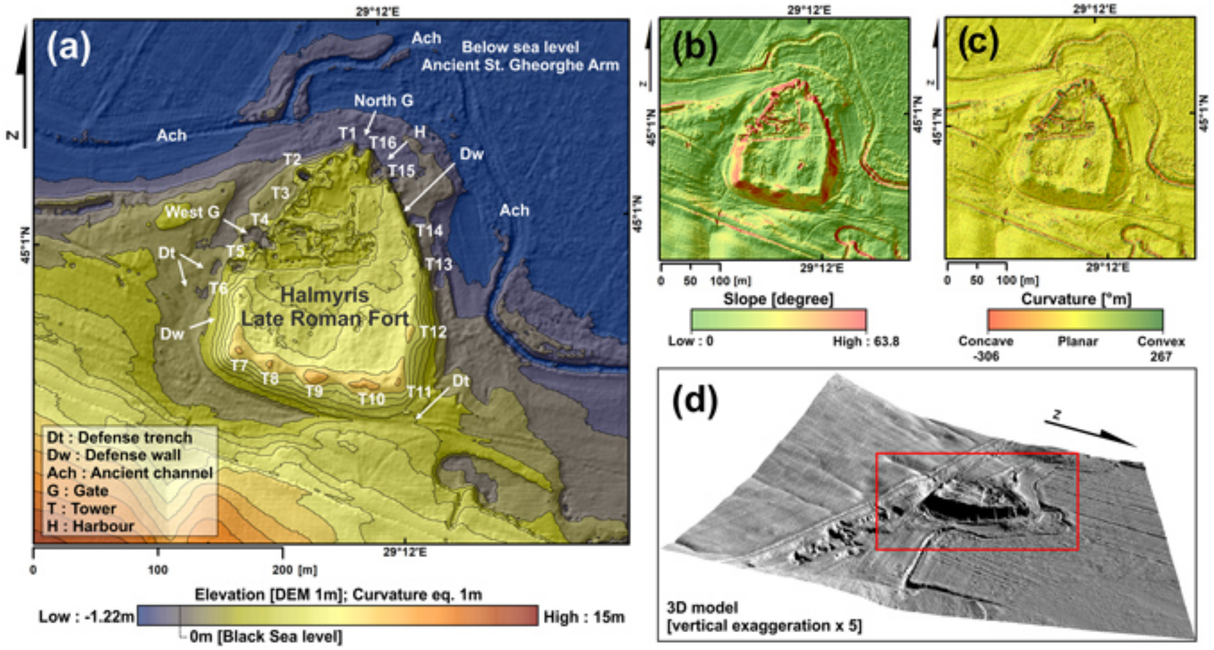
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Halmyris Fortress — the last Roman city-port on the eastern side of the Danubian Limes

2020
10
OCTOBER

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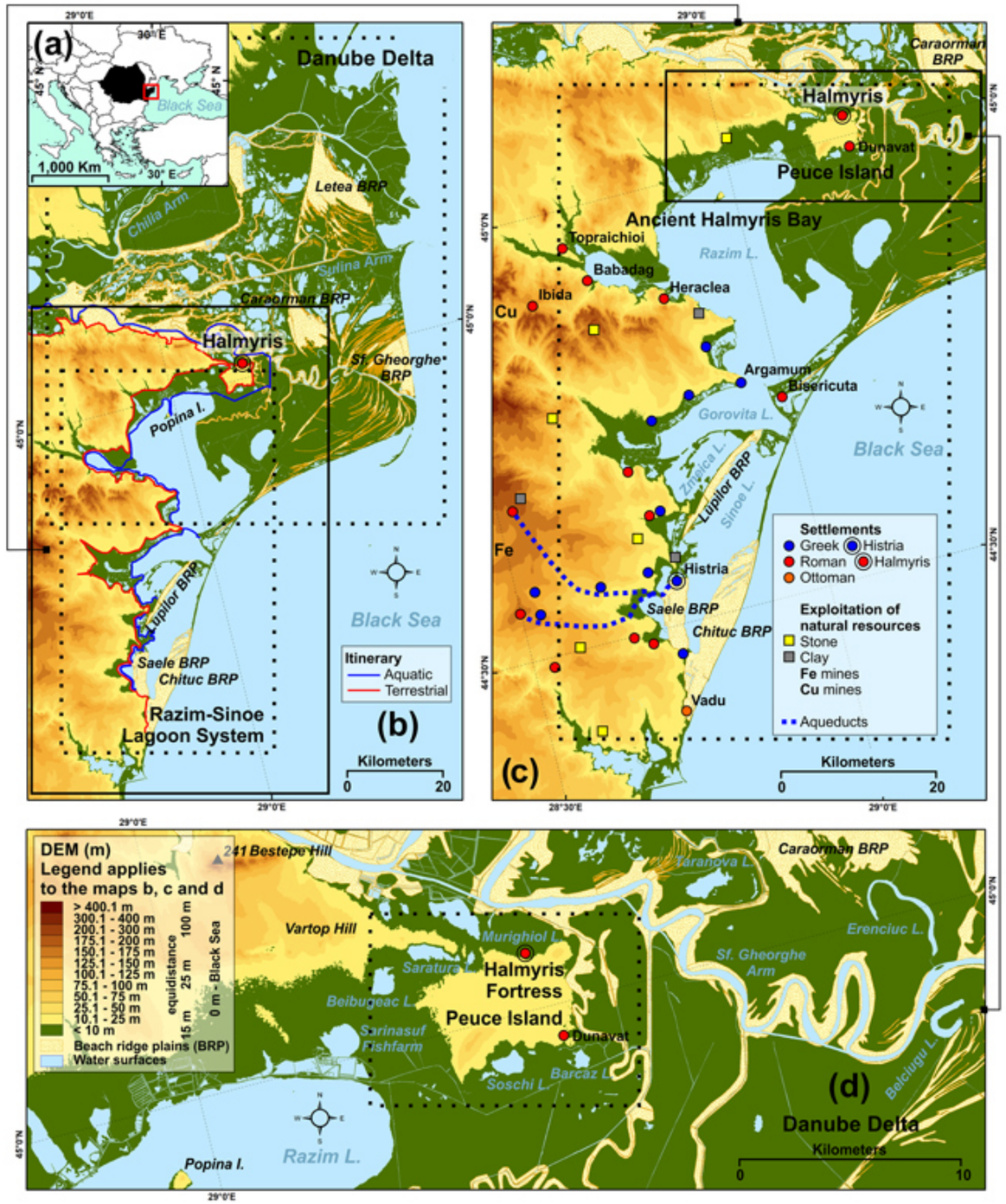


Halmyris Fortress – the last Roman city-port on the eastern side of the Danubian Limes

The testimonies left by the ancient Greeks indicate the existence of the legendary Peuce Island at the mouth of the Danube River. The first geographic information on the Circumpontic regions emerged in the ancient Greek literary works known as the Iliad and Odyssey. "An island, called Peuce from the name of the Sarmatian Nympha, stand where Hister [the Danube], savage stream, shoe either bank is ever terrible, flows down through his wild nurslings to the sea" (Valerius Flaccus, Argonautica 8. 217 ff, trans. Mozley, Roman epic c. 1st century AD). Several locations for the island have been proposed throughout history but all of these hypotheses have been proven wrong, except for that regarding the Dunavat Peninsula (Murighiol – Tulcea County).

In the present time, the only ancient remains within Dunavat Peninsula is Halmyris fortress, the last Roman bastion on the eastern side of the Danubian Limes. It was a city-port which plays a primordially military role, situated at the link between the fluvial and the marine environment. The fortress is famous for its location at the foot of the legendary Peuce Island. Halmyris benefits from important natural resources from two environments with distinct characteristics: marine (Halmyris Bay) and freshwater (Danube Delta). When the city was founded, the St. George arm was the most important navigation artery of Danube. Therefore, the penetration upstream was monitored strictly by the city-port of Halmyris (customs).

Alin Mihu-Pintilie



Figures

Top: Present morphology of the Halmyris Fortress: (a) Digital Elevation Model (LiDAR technology); (b) slope map; (c) curvature map; (d) 3D model

Right: The geographical location of Halmyris Fortress in: (a) Romania; (b) on the territory of the Danube Delta and Razim-Sinoe Lagoon System; (c) on the current shore of the Black Sea equivalent to the ancient Halmyris Bay; (d) within the Peuce Island?

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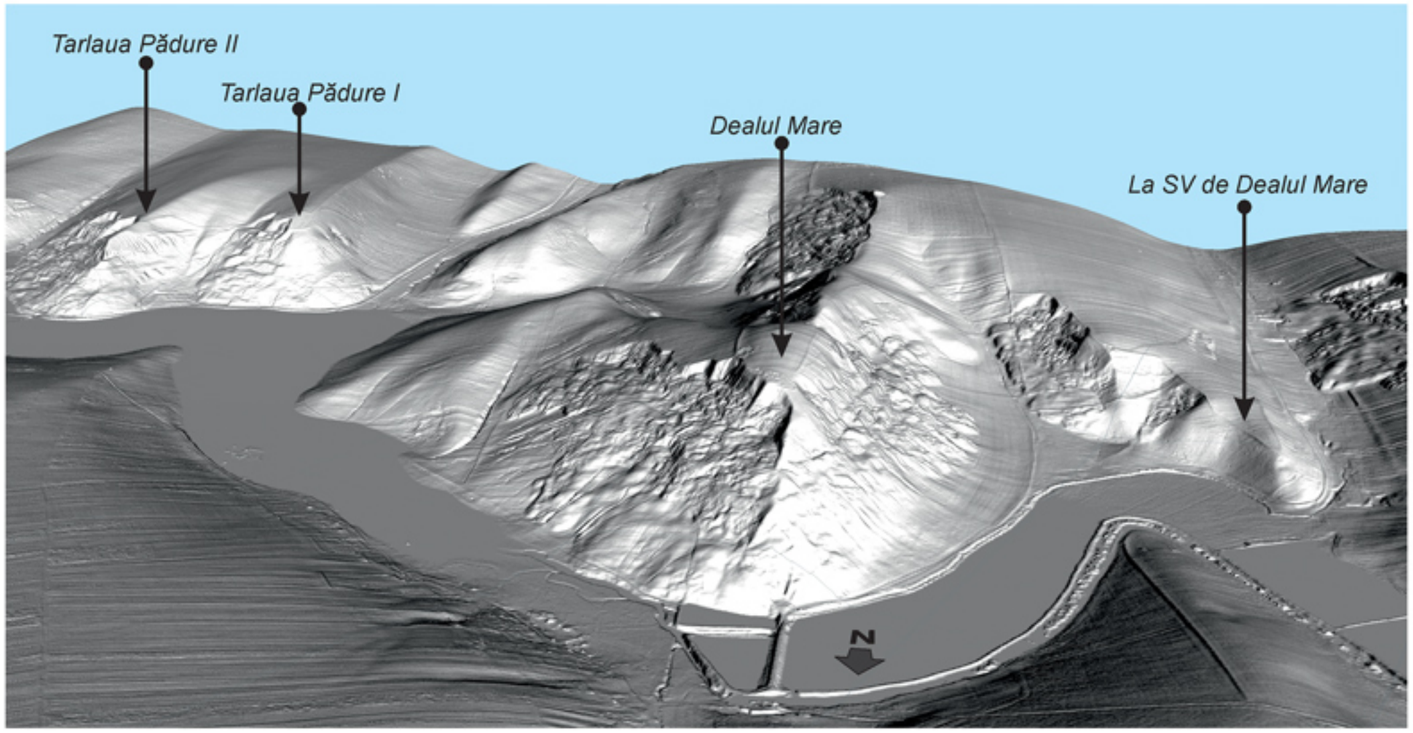
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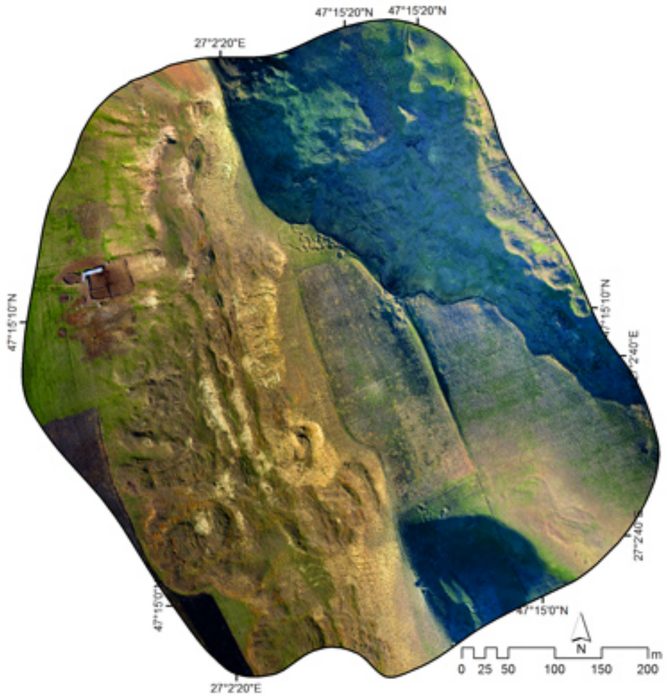


The Chalcolithic site of Războieni–*Dealul Mare/Dealul Boghiu.* Aerial photography from the Northeast

2020
11
NOVEMBER

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The Chalcolithic site of Războieni–*Dealul Mare/Dealul Boghiu*

The Chalcolithic settlement of Războieni–*Dealul Mare/Dealul Boghiu* is located in northeastern Romania in Iași County in the territory of the village of Războieni, Ion Neculce commune, on the border with Filiași village. The settlement is located on a promontory running in a NW–SE direction, strongly affected by active landslides. The absolute elevation is 185 m, and the relative one 85 m.

Războieni–*Dealul Mare/Dealul Boghiu* was first investigated in 1930s through trial pits by Tafrali, O., Manoliu, V. and Condurache, E. who mention that "pieces from the collapsed walls of the dwellings" were found less than half a meter from the surface. The site was later investigated through fieldwalking in 1955 by N. Zaharia and N. Berlescu, and in 1984–1986 by D. Boghian and C. Mihai. The abundant archaeological material collected from field surveys, comprising trichrome painted ceramic fragments, stone tools and anthropomorphic figurines, date the site to the A3 sub-phase of the Cucuteni culture.

Digital and cutting-edge technology barrowed from geosciences (non-destructive and high-resolution ground-based geophysical and airborne sensing techniques) were applied for this site. On the basis of results innovative characteristics are described concerning intra-site spatial organisation, a typology of the fortification systems, the existence of ritual or delimitation ditches, and the presence of habitations outside fortified areas.

Andrei Asăndulesei

Figures

Top: Three-dimensional model (hillshade perspective) of the terrain

Top-right: Orthorectified image of the site

Right: Magnetic map(-15/+15 nT, white/black) overlaid on the orthophotoplan

References

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Engraved bronze disc-butted axe from the Middle Bronze Age, discovered in Iorcani (Iași County)

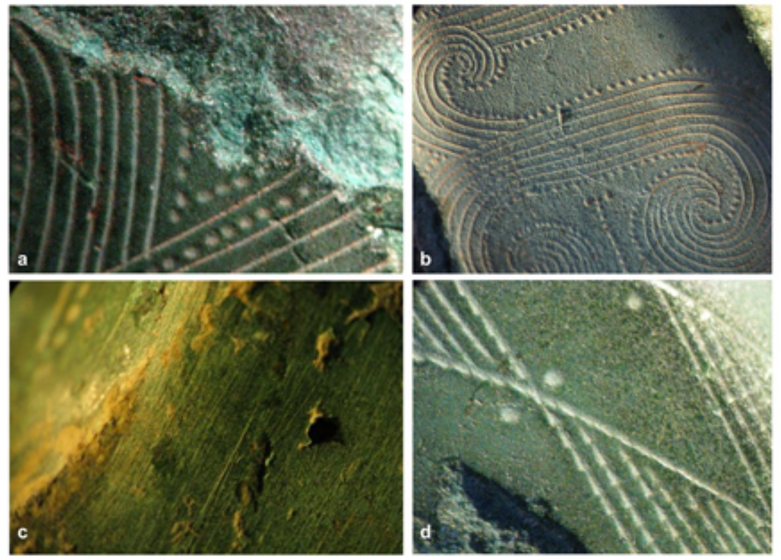
2020

12

DECEMBER

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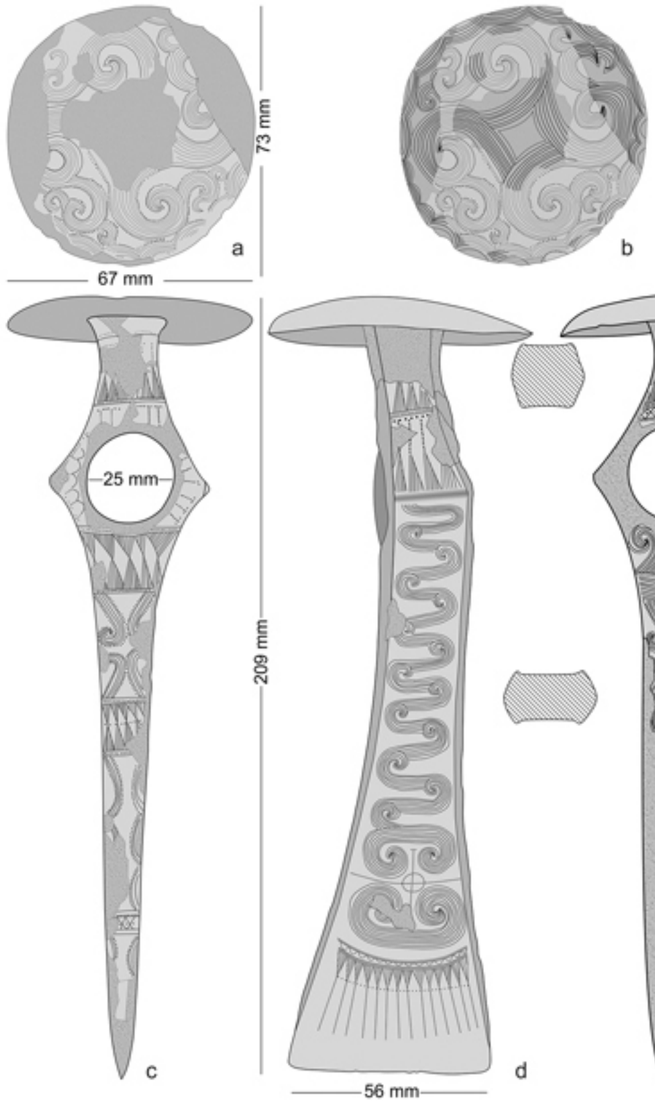


Engraved bronze disc-butted axe from the Middle Bronze Age from Iorcani

The disc-butted bronze axe was discovered in the early '50s (during agricultural works), by a peasant, near the village of Iorcani (Iași County, Romania), kept (and used) for over 50 years in its household. Recently (2012), it got into the school museum of Tătărași village as an ethnographic item, without knowledge of its age and value. Is there where it was spotted and recognized by F.A. Tencariu (Arheoinvest), being subsequently analyzed and published by an interdisciplinary team. This type of axe (A1, according to the established typologies), with few known items (only 29 so far), is a typical discovery (mainly as a component of hoards or as an individual find) for the Middle Bronze Age from the area west of the Carpathians — the Wietenberg, Suciu de Sus and Otomani-Füzesabony cultures (roughly 2200–1500 BC).

On account of its elegant shape, decoration and sizes, this artefact is an outstanding specimen of its type. The ornamentation was carefully chased and/or engraved and is composed of motifs (mostly solar symbols) also present on other axes of the same type, but not identical to any other one. What was its functionality: a weapon or an insignia? One can assume, based on its original appearance and intricate decoration, that it was meant to be foremost a ceremonial weapon, a symbol of wealth, power and/or warrior skills; at the same time, its design, blade and weight are clues that, in case of necessity, the axe could also be a deadly weapon. Most probably, this kind of artefacts were not mass produced, but on commission, as customized personal objects for prominent figures of those times.

Felix-Adrian Tencariu & Viorica Vasilache



Figures

Top: Details of the disc-butted axe. Small concavities inside the shaft hole

Top-right: Optical microscopy images showing details of the decoration of the disc-butted axe: a-b. aspects of the decoration (1.6×, 0.65×); c. traces of polishing on the neck of the axe, right below the disk (1.25×); d. decorative motifs on the neck of the axe (1.6×)

Right: Drawing of the disc-butted axe from Iorcani: a. the disc; b. the reconstruction of the decoration on the disc; c. the upper narrow face; d. the wide face; e. the lower narrow face

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