



JOURNAL OF ANCIENT HISTORY AND ARCHAEOLOGY

Institute of Archeology and Art History of
Romanian Academy Cluj-Napoca
Technical University Of Cluj-Napoca



JAHA
JOURNAL OF ANCIENT HISTORY
AND ARCHAEOLOGY

Journal of Ancient History and Archaeology

DOI: <http://dx.doi.org/10.14795/j.v9i3>

ISSN 2360 266x

ISSN-L 2360 266x



Scopus®



**Clarivate
Analytics**



Central and Eastern European Online Library



DOAJ DIRECTORY OF
OPEN ACCESS
JOURNALS

No. 9.3 /2022

CONTENTS

STUDIES

ANCIENT HISTORY

Annamária – Izabella PÁZSINT

CONTRIBUTION TO THE *PROSOPOGRAPHIA PONTI EUXINI EXTERNA. KALLATIANOI ET ODESSITAI* 5

Alexander CANDUCI

THE ROMAN WITHDRAWAL FROM BRITAIN – 410 OR 435?
A FRESH PERSPECTIVE 17

Aleksandr SYMONENKO

LATE SCYTHIAN CULTURE OF THE LOWER DNIEPER:
THE ISSUE OF ORIGIN 27

NUMISMATICS

Cristian GĂZDAC, Radu ZĂGREANU

THE SMALL HOARD FROM HERINA.
DYRRACHIUM COINS AND SILVER BRACELET 33

ARCHAEOLOGICAL MATERIAL

Stanislav GRIGORIEV

CULTURAL GENESIS AND ETHNIC PROCESSES
IN CENTRAL AND EASTERN EUROPE IN THE 3RD
MILLENNIUM BC: YAMNAYA, CORDED WARE,
FATYANOVO AND ABASHEVO CULTURES 43

Beatrice CIUȚĂ, Florin GOGĂLTAN

VEGETAL RITUAL OFFERINGS
FROM A LATE BRONZE AGE PIT
FROM VLAHA-PAD SITE, CLUJ COUNTY, ROMANIA 85

Marius-Mihai CIUȚĂ, Florian MATEI-POPESCU

A FRAGMENT OF A ROMAN MILITARY DIPLOMA
DISCOVERED IN THE VICINITY OF MICOȘLACA
(MIKLÓSLAKA, OCNA MUREȘ CITY, ALBA COUNTY) 93

Alka STARAC

SHRINES OF THE *DOMUS* IN THE QUARTER
OF ST. THEODORE IN PULA 103

TOPOGRAPHY

Florin-Gheorghe FODOREAN

MAPS OF ROMAN DACIA. III. MAP 21 DACIA-MOESIA
(1:1,000,000) IN THE BARRINGTON ATLAS
OF THE GREEK AND ROMAN WORLD 125

Design & layout:
Petru Ureche

Studies

ANCIENT HISTORY

VEGETAL RITUAL OFFERINGS FROM A LATE BRONZE AGE PIT FROM VLAHA-PAD SITE, CLUJ COUNTY, ROMANIA

Abstract: An amazing and extremely rare archaeological context discovered at the Vlaha-Pad site located in the Transylvania area (Cluj County, Romania) may be related to offerings in the Late Bronze Age. Radiocarbon calibrated data indicates that the context ranges from 1612 to 1433 cal. BC. The context is particularly important regarding the unearthing of a wood barrel full of sprouted barley that can be associated with a ritual offering to Gods. In addition to the wood barrel, several special vessels that are usually related to ritual practices have been uncovered. The archaeological materials recovered from within belong to the Wietenberg IV culture dated to the Late Bronze Age. Our study focuses on the context with ritual deposition and the possible hypotheses related to it.

Keywords: charred macro-remains, germinated seeds, *Hordeum vulgare*, Late Bronze Age, ritual.

INTRODUCTION

An incredible and very rare archaeological context discovered at the Vlaha-Pad site in the Transylvania area (Cluj County, Romania) may be related to vegetal ritual offerings in the Late Bronze Age. A pit with a special inventory was discovered in a settlement from the Vlaha-Pad during the rescue excavations in 2005. The pit contains typical Wietenberg IV and Cehăluț-Hajdúbagos/Pișcolt-type ceramic sherds, as well as whole pots deposited near the wooden barrel filled with charred grain seeds. To understand the complexity of the phenomenon that led to the votive deposition of cereals, as well as the usefulness of ritual vessels in the pit, we hypothesized that the deposition was made in appreciation to the Gods or to capture their goodwill. Going further with the idea and attempting to determine the motivation for the choice of barley species in this context, as well as analysing some details that led to analogies with similar ritual contexts, we concluded that our discovery may be correlated to an offering related to beer in prehistory. Consequently, the topic of this study is the interpretation of feature 0384, which represents an emergent example of this kind.¹

THE SITE

The Vlaha-Pad site was intensively explored between August 2004 and September 2007 during archaeological research prior to the development of the Borș - Brașov highway.²

¹ GOGALTAN *et alii* 2011, 163-164; GOGALTAN/NAGY 2012, 105-106; NEMETH 2015, 88-89.

² GOGALTAN/NAGY 2012, 105; NEMETH 2015, 12.

Beatrice CIUȚĂ

„1 Decembrie 1918” University Alba Iulia
beatrice.ciuta@uab.ro

Florin GOGĂLTAN

Institute of Archaeology and Art History Cluj-Napoca
floringogaltan@gmail.com

DOI: 10.14795/j.v9i3.777

ISSN 2360 – 266X

ISSN-L 2360 – 266X

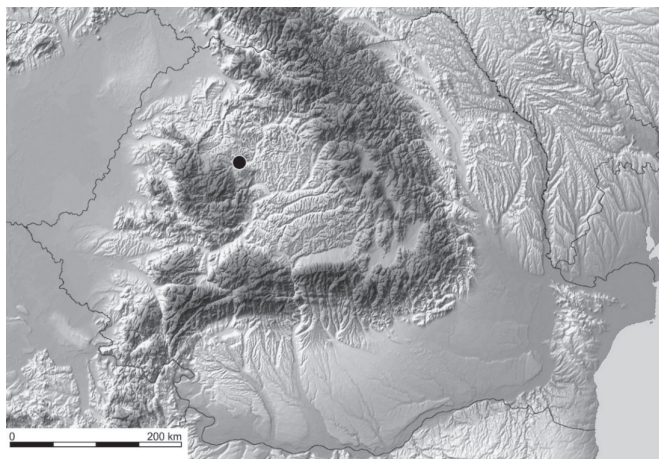


Fig. 1. Vlaha-Pad. The site location (*apud* Nemeth, 2015, fig. 1).

The rescue excavations led to the identification of traces of a Bronze Age settlement with artefacts attributed to the Wietenberg culture, the Hajdúbajos/Pișcolt – Cehăluț group, Noua culture, and some Suci de Sus influences, such as a dwelling from the first Iron Age. Based on ceramic material and metal objects, the prehistoric site can be dated to Reinecke Br.D and HaA1 Central Europe.³

Extensive excavations at Vlaha-Pad, which covered almost the entire surface of a prehistoric settlement, made possible the complete reconstruction of the various stages of development of the Late Bronze Age settlement and provided important information about its internal organization. Traces of at least two horizons were revealed during the settlement earlier, belonging to the Wietenberg – Cehăluț cultural horizon, followed by traces of a sporadic inhabitation of the Noua culture. The Bronze Age settlement was superimposed partly on the settlement of the first Iron Age, the necropolis of the 6th century AD. Consequently, some structures were later disturbed, and the situation was aggravated by agricultural work in later decades.

The prehistoric settlement from Vlaha-Pad is located on the second relatively long and flat terrace of the Finișel brook (altitude of 471.5 m around the site itself), which crosses the locality Vlaha (com. Săvădisla) in

the west-east direction (Fig. 1). Racoș spring, as it is called by the locals, is a stream of the Someșul Mic. The settlement dominates the landscape through an altitude difference of approximately 40 m. At the southwestern limit of the terrace, towards the border of Finișel, the hills mark the eastern frame of the Apuseni Mountains (Pădurea Mică, with an altitude between 400 and 500 m). The eastern edge of the Vlaha-Pad place is located approximately 300 m west of the point at which the Feneșu stream joins the Racoș spring, the latter flowing from the Vălișoara village.⁴

It is noteworthy that the land experiences excess moisture in the rainy season, with water flowing from the adjacent hill. The micro zone, located at the northern edge of the valley of the Hășdatele depression, is in the direction of a relatively important connection between the upper basin of the Someșul Mic and the lower segment of the Arieșului Valley.⁵

In a micro-regional framework, the archaeological site Vlaha-Pad is part of the Săvădisla Depression, contiguous to the southwest of the Big Mountain and West Mountains Gilău. The two massifs extend to the left of the Someș Rece and to the Arieș valley, with smooth surfaces and a maximum altitude of 1,826 m at the top of Muntele Mare.

ARCHAEOLOGICAL CONTEXT

The pit that is the object of our investigation was discovered in the Late Bronze Age settlement from the Vlaha Pad during the rescue excavations in 2005. It contains typical Wietenberg IV and Cehăluț-Hajdúbajos/Pișcolt-



Fig. 2. Archaeological complex 0384. The pit with vessels from inside (Photo F. Gogăltan).

³ GOGALTAN/NAGY 2012, 112; NEMETH 2015, 24.

⁴ GOGALTAN/NAGY 2012; NEMETH 2015.

⁵ GOGALTAN/NAGY 2012, 106; NEMETH 2015, 7.



Fig. 3. Archaeological complex 0384 during the sampling process (Photo F. Gogáltan).



Fig. 4. Archaeological complex 0384. The layer of charred seeds from the bottom of the wood barrel (Photo F. Gogáltan).

type ceramic sherds, as well as whole pots deposited near a wooden recipient full of carbonised grain seeds. The presence of foreign cultural elements in the Wietenberg environment and its connections with the surrounding communities determine aspects of the Late Bronze Age cultural background in Transylvania.

Complex Cx 0384 was outlined in surface I, square no. 53 next to the T356 stake at a depth of -2 cm in the form of a circular spot of relatively large brown-grey colour, containing an accumulation of coal, adobe, and few ceramic fragments.⁶

After unearthing, the pit was found to have initially been bell-shaped or vaulted, characterised by a circular opening with a diameter of approximately 150 cm and walls that widened towards the right bottom, dug in the sterile yellow soil to a depth of -80 cm (Fig. 2). During the works, accumulations of archaeological materials at different depths/levels were identified, separated somewhat by a thin layer of earth pigmented with coal and charred grains, with much less archaeological material⁷ (Fig. 3).

The first level of material accumulation was identified at approximately 20–30 cm, indicated by smaller pieces of burnt clay, coal, and large fragments of decorated vessels in a somewhat horizontal position, which appeared to have been intentionally deposited.

At depths of approximately -20 cm and -30 cm, two miniature chairs were discovered with backrests and four legs, which had been modelled from clay. At a depth of -35 cm, many fragments of solder appeared in the filling, which were decorative elements on a large construction or arrangement that were strongly burned. The number of charred grains increased

⁶ GOGALTAN *et alii* 2011, 163-164; GOGALTAN/NAGY 2012, 105-106; NEMETH 2015, 88-89.

⁷ GOGALTAN *et alii* 2011, 168-169; GOGALTAN/NAGY 2012, 109-110; NEMETH 2015, 88-89.



Fig. 5. Archaeological complex 0384. View on the bottom and lateral part of the wood barrel (Photo F. Gogáltan).



Fig. 6. Archaeological complex 0384. The bottom of the wood barrel (view from above) (Photo F. Gogáltan).

considerably at this level, accumulating on the western and southern sides of the pit.⁸

⁸ GOGALTAN *et alii* 2011, 168-169; GOGALTAN/NAGY 2012, 109-110; NEMETH 2015, 88-89.

⁹ GOGALTAN *et alii* 2011, 168-169; GOGALTAN/NAGY 2012, 109-110; NEMETH 2015, 88-89.

¹⁰ GOGALTAN *et alii* 2011, 168-169; GOGALTAN/NAGY 2012, 109-110; NEMETH 2015, 88-89.

¹¹ GOGALTAN *et alii* 2011, 168-169; GOGALTAN/NAGY 2012, 109-110; NEMETH 2015, 88-89.

At a depth of approximately -50 cm to -60 cm, the accumulation of a large quantity of charred grains was found in the centre of the complex (Fig. 4). At its north-eastern limit, carbonised traces were identified in a semicircle of a braid of an organic material, which later turned out to be the wall of the wooden container discovered at a depth of -60 cm. Large amounts of charred seeds were found both in this “basket/barrel” and under it⁹ (Fig. 5).

The observations made during the excavations indicated that the wall of this container was most likely made of wickerwork, the bottom of which had a diameter of approximately 60 cm at the base and an initial height of approximately 30–40 cm (Fig. 6). Four vessels were placed at a depth of approximately 70–80 cm near the bottom of the barrel. A large bowl and a vessel, the foot of which was upside down, lined the container. An upside-down cup was discovered in the bowl. Next, a small vessel of coarse workmanship, a cup, a flint blade, and a clay spindle were found.¹⁰

This pit was initially dug and arranged for storage, and after abandonment it was reused for the deposition of the special inventory mentioned above.¹¹

MATERIAL AND METHOD

C14 data

The inventory of the studied feature belongs to the Wietenberg-Hajdúbagos/Pișcolt–Cehăluț culture discoveries. The results of radiocarbon dating on a few seeds from feature 0384 (AMS Lab Code: DeA–5152) suggested an age of approximately 3236 ± 41 BP (in 2σ ranges: 1612–1433 cal BC with 95.4% probability) (Fig. 7) in Reinecke’s Central European BrD.¹²

Two plastic bags filled with charred macro remains were entirely recovered from **Cx 0384** and sampled. After a sorting operation was conducted, the weight of the sample containing the pure carbonised macro-residues was 1,418 g (approximately 4,726 caryopsis). Numerical analysis was based on the number of plants remains derived from the number of entire remains added to half of the fragments.

The charred macroremains were sorted under a magnifying lamp and identified using a binocular microscope, both by comparison with a modern reference collection and with the aid of relevant identification literature.¹³ We also used the *Digital Atlas of Economic Plants in Archaeology*. The nomenclature used in this article is based on Zohary and Hopf (1988) and Flora României (Romanian Flora I–XII).

Morphological analysis of cereal caryopsis revealed that they belong to the species *Hordeum vulgare*¹⁴ (Fig. 8. a front view, b. back view).

Upon closer examination, we found that most of the charred seeds had germinated traces, and some were still wrapped in straw (Fig. 8, c. amorphous charred seeds). Evidence of germination was found based on morphological characteristics: it was visible through the development of beetles (germ) in the embryo and through grooves on the dorsal side of the seed. Some grains still had straw. Germinated seed deposits are quite rare in archaeological contexts, which makes this discovery from *Vlaha-Pad* of great interest to both the archaeological and the archaeobotanical communities. Of course, the question arises regarding whether the seed germination was accidental. This is a possibility when germinated seeds are discovered in humid conditions (wet soil, crops from rainy summers, dried in ovens,

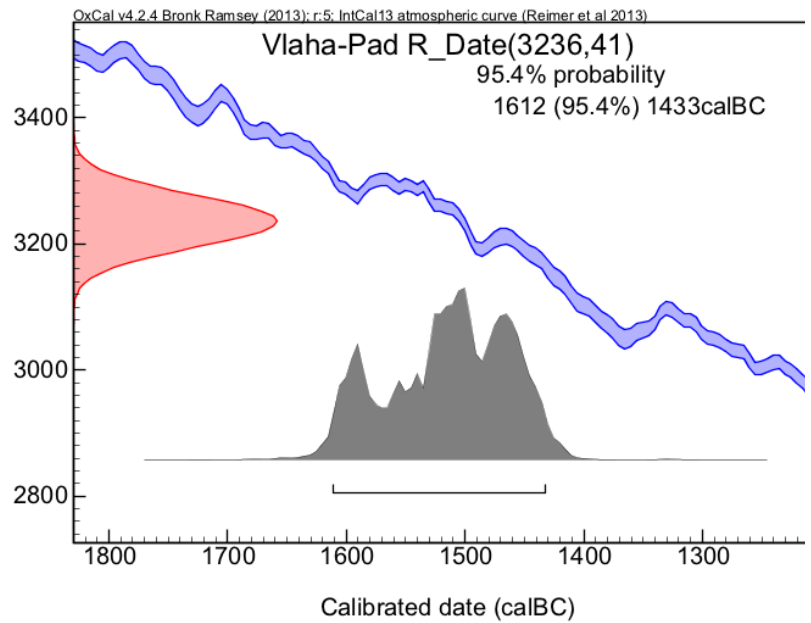


Fig. 7. Calibrated radiocarbon date from *Vlaha-Pad*, Feature 0384 (apud Gogăltan and Nemeth).

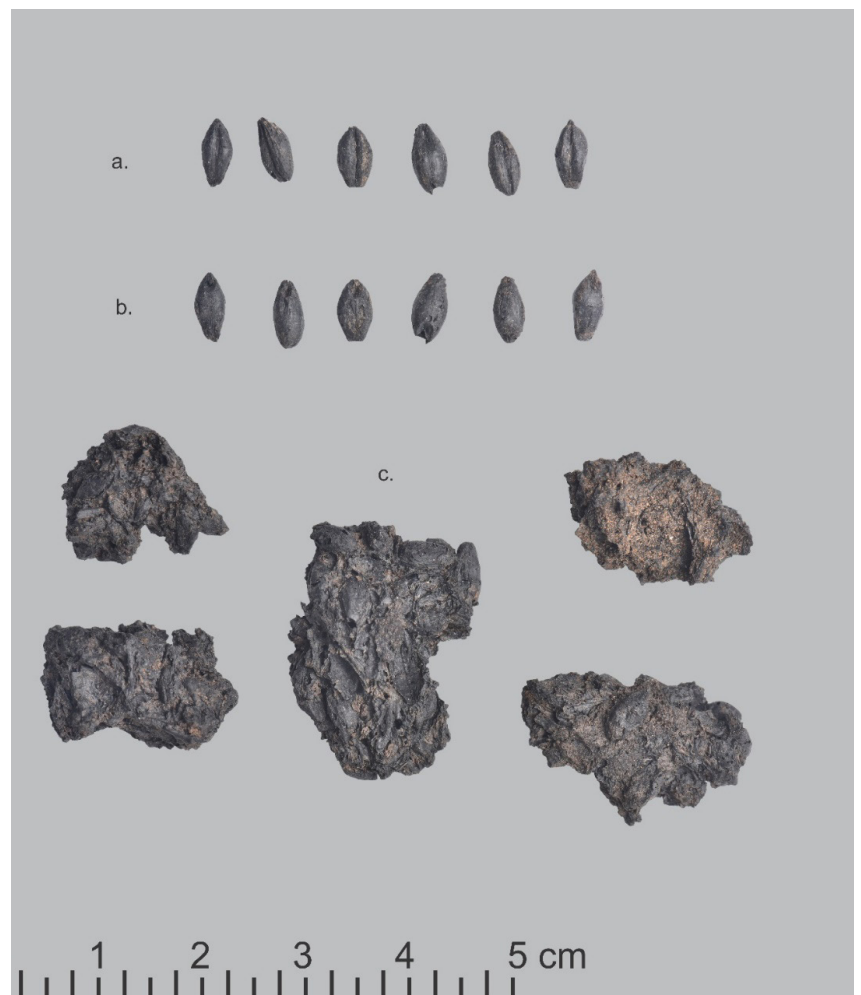


Fig. 8. Seeds of *Hordeum vulgare* (Photo B. Ciută).

¹² GOGALTAN 2014, 35-38.
¹³ ZOHARY/HOPF 1988.
¹⁴ ROS *et alii* 2014, 568-569.

etc.), but in this case, the evidence is obvious (the context is relevant through ritual deposition).

DISCUSSION

A similar feature was discovered and investigated by Bejinariu Ioan and Ciută Beatrice in the settlement Șimleul Silvaniei- Observator attributed to the Hajdúbagos / Pișcolt – Cehăluț group.¹⁵ Inside the archaeological complex Gr G27 / 2010, the pit, which was cylindrical in shape with a diameter of 130 cm and a depth of -90 cm, exposed a rich inventory. The seeds were deposited at the bottom of the pit in a thick 10 cm layer, and fragments of pots were thrown over it, many of which had previously been broken. Similar to the situation faced in the case of complex 0384, the ceramic inventory of the pit was composed mainly of integrable vessels (cups, bowls, and pots) that were made of a high-quality paste, were well-burned, had polished surfaces, and were richly decorated.¹⁶

Rich archaeological material was discovered in both complexes from Vlaha and Șimleul Silvaniei. The special/ritual character of these complexes was confirmed by their unusual inventory. Wood barrel 0384 filled with grain together with the vessels deposited around it was purified by fire, resulting in the burning of the organic material. The pit was then filled with “sacred waste” made from ritual vessels. We may assume that the inventory of this pit is related to fertility cults.¹⁷ Therefore, the question arises: *Is the discovery of germinated barley from Vlaha-Pad correlated with beer consumption?*

In search of explanations regarding the intention of the depositions from the archaeological context Cx 0384, we considered that the theory of a ritual offering seems the most plausible. Following this idea, we gathered analogies that support our hypothesis. We hypothesised that the ritual offering of germinated seeds of *Hordeum* sp. has a ritual purpose. Similar contexts in the Bronze Age were found to have a ritual destination. The wood barrel filled with barley grains together with special vessels suggests a god/ritual offering.¹⁸ The archaeobotany specialist Hans P. Stika highlighted¹⁹ the perishability of wooden containers from the prehistory of Europe, which makes their discovery very rare. In the present case, the deliberate burning of the barrel led to its preservation as well as that of its contents.

CONCLUSION

We found several similar discoveries in archaeological contexts from the Bronze Age of Romania and Europe. There is a similar discovery in the tumulus from Susani (Timiș County).²⁰ The discoveries from the tumulus at Susani (Timiș County), especially the so-called “group 6” and “group 7” raised interesting discussions concerning this kind of findings. The group marked by the authors with the number 6 consisted of a big bowl containing burnt grains and surrounded by 66 small cups. They were grouped in 6 different units, placed one inside the other, upside down or sideways. To the west

another 13 bowls and a small cup were found. The grains were burned in a very strong fire that turned the soil reddish and blackish at a depth of up to 10 cm. Both the big plate and the cups had traces of secondary burning. Most of the vessels were complete. The group 7 was discovered in 1965 by Ioan Stratan during the first excavation campaign from Susani. It contains four big biconical vessels oriented east-west. These vessels contained another 22 fragmentary cups, out of which only three could be restored. The first interpretation of these pottery offerings was related to a funerary banquet.²¹

There are many analogies related to the production and consumption of beer in prehistory, so the present discovery can be associated with this hypothesis. We list a few below.

- Lazuri Satu Mare (north of Romania)²² Bronze Age, located in the same area as the Șimleul Silvaniei and Vlaha sites.
- Archondiko (Valamoti, 2018) (north of Greece); Argissa²³ (eastern part of Greece), Bronze Age.
- Ada Tepe, Turkey.²⁴
- Emar, Syria.²⁵
- Hochdorf (Germany), early Iron Age (Celtic settlement): Thousands of germinated seeds were discovered.²⁶
- Uppåkra (Sweden), Iron Age (ovens for drying germinated seeds/germinated seeds).²⁷
- Østerbølle (Denmark), Iron Age.²⁸

It is very plausible that the artefacts and germinated barley of Cx 0384 are closely related to a ritual offering to the gods that was associated with the production and consumption of beer at that time.²⁹ Also, the vessels discovered together with the barrel full of germinated seeds are included in the category of vessels with ritual destination. In addition to the vessels, there is also the ritual deposition of the 2 chairs with backrests, but also of the spindle, which we find most often in such depositions in the Late Bronze Age, but also in later contexts.

Considering the barrel in which the germinated grain offering was intentionally placed and the ritual vessels, which were all deposited into a pit that was later set on fire, the purpose is obvious. The pit might have a ritual destination, and the deposition has a votive character. All this may have been done to thank the gods worshipped by the community that lived in the *Vlaha* area in the Late Bronze Age. As mentioned previously, germinated seed deposits are quite

¹⁵ CIUTA/BEJINARIU 2012, 155-167.

¹⁶ CIUTA/BEJINARIU, 2012, 156.

¹⁷ CIUTA/BEJINARIU, 2012, 157.

¹⁸ GOGALTAN 2014, 41.

¹⁹ STIKKA 2011, 57.

²⁰ GOGALTAN 2014, 42.

²¹ STRATAN/VULPE 1977, 46.

²² MARTA 2006-2007, 111-129.

²³ VALAMOTI 2018, 615-617.

²⁴ NIKOV *et alii* 2018, chapter 17.

²⁵ SALLABERGER 2012, 158.

²⁶ STIKA 1996, 82-87; STIKA 2011, 56.

²⁷ LARSON *et alii* 2018, 54-57.

²⁸ KATZ/VOIGHT 1986, 28-29

²⁹ STANDAGE 2006, 27-28.

rare in archaeological contexts, which makes this discovery from Vlaha-Pad of great interest to both the archaeological and archaeobotanical communities. The bottom of the barrel was preserved due to the deliberate burning of the pit. Such cases are extremely rare in the prehistory of Europe.

REFERENCES

CIUTĂ/BEJINARIU 2012

Ciută, B./Bejinariu, I., Date arheobotanice privind conținutul unei gropi rituale aparținând grupului cultural Cehăluț – Hajdubagos, *Terra Sebus* 4, 155–167.

GOGĂLTAN/NÉMETH/APAI 2011

Gogăltan, Fl./Németh, E. R./ Apai, E., Eine rituelle Grube bei Vlaha, Gemeinde Săvădisla (Kreis Cluj). In: Berecki, S./Németh, E. R./Rezi, B. (eds), *Bronze Age Rites and Rituals in the Carpathian Basin, Proceedings of the International Colloquium from Târgu Mureș 8–10 October 2010* (Cluj-Napoca: Mega), 163–184.

GOGĂLTAN 2014

Gogăltan, Fl., Drinking with the Gods? The problem of Bronze Age pot deposits in Transylvania, *Studia UBB Historia* 59/1, 35–82.

GOGĂLTAN/NAGY 2012

Gogăltan, Fl./Nagy, J. G., Profane or Ritual? A Discovery from the End of the Early Iron Age from Vlaha-Pad, Transylvania. In: Berecki, S. (ed.), *Iron Age rites and Rituals in the Carpathian Basin, Proceedings of the International Colloquium from Târgu Mureș 7–9 October 2011* (Cluj-Napoca: Mega), 105–133.

KATZ/VOICHT 1986

Katz, S.H./Voigt, M., Bread and Beer, *Expedition* 28/2, 23–34.

LARSON/SVENSSON/APEL 2018

Larsson, M./Svensson A./Apel J., Botanical evidence of malt for beer production in fifth–seventh century Uppåkra, Sweden, *Archaeological and Anthropological Sciences* 11, 1961–1972. <https://doi.org/10.1007/s12520-018-0642-6>

MARTA 2006-2007

Marta, L., Groapa 154 a așezării din epoca bronzului de la Lazuri. Depunere de obiecte aflate în legătură cu producerea berii preistorice?, *Satu Mare - Studii și comunicări. Arheologie* 23-24/1, 111–129.

MEUSSDOERFFER 2009

Meussdoerffer, F. G., A Comprehensive History of Beer Brewing. In: Eßlinger, H.M. (ed.), *Handbook of Brewing: Processes, Technology, Markets* (Weinheim: Wiley-VCH Verlag), 1–42 <https://doi.org/10.1002/9783527623488.ch1>

NELSON 2005

Nelson, M., *The barbarian's beverage. A History of Beer in Ancient Europe* (London, New York: Routledge).

NEMETH 2015

Nemeth, R., *Contribuții privind perioada târzie a epocii bronzului în Podișul Transilvaniei. Așezarea de la Vlaha-Pad*, Doctoral Thesis, Alexandru Ioan Cuza University, Iași, 2015.

NIKOV et alii 2018

Nikov, K./Marinova, E./De Cupere, B./ Hristova, I./ Dimitrova, Y./Iliev, S./ Popov, H., Food supply and disposal

of food remains at Late Bronze and Early Iron Age Ada Tepe: Bioarchaeological aspects of food production, processing and consumption (chapter 17). In: Ivanova, M./ Athanassov, B./Petrova, V./Takorova, D./Stockhammer, Ph. (eds.), *Social Dimensions of Food in the Prehistoric Balkans* (Oxford & Philadelphia: Oxbow Books), 278–299.

ROS et alii 2014

Ros, J./Evin A./Bouby, L./ Ruas, M.P., Geometric morphometric analysis of grain shape and the identification of two-rowed barley (*Hordeum vulgare* subsp. *distichum* L.) in southern France, *Journal of Archaeological Science* 41, 568–575.

ROSENSTOCK/SCHIEBNER 2017

Rosenstock, E./Schiebner, A., Fermentierter Brei und vergorenes Malz: Bier in der Vorgeschichte Südwestasiens und Europas, *Mitteilungen der Anthropologischen Gesellschaft in Wien* 147, 31–62.

SAMUEL 1996

Samuel, D., Archaeology of ancient Egyptian beer, *Journal of the American Society of Brewing Chemists. The Science of Beer* 54/1, 3–12.

SALLABERGER 2012

Sallaberger, W., Home-made Bread, Municipal Mutton, Royal Wine. Establishing Social Relations during the Preparation and Consumption of Food in Religious Festivals at Late Bronze Age Emar. In: Pollock, S. (ed.), *Between Feasts and Daily Meals: Toward an Archaeology of Commensal Spaces* (Berlin: Edition Topoi). *eTopoi. Journal of Archaeological Science, special volume 2*, 157–177.

STIKA 1996

Stika, H.P., Traces of a possible Celtic brewery in Eberdingen-Hochdorf, Kreis Ludwigsburg, southwest Germany, *Vegetation History and Archaeobotany* 5, 81–88.

STIKA 2011

Stika, H.P., Beer in Prehistoric Europe. In: Schiefenhovel, W./Macbeth, H. (eds.), *Liquid Bread. Beer and Brewing in Cross-Cultural Perspective* [The Anthropology of Food and Nutrition 7] (Oxford: Berghahn Books), 55–69.

STRATAN/VULPE 1977

Stratan, I./Vulpe, Al., Der Hugel von Susani, *Praeistorische Zeitschrift* 52, 1, 28–60.

VALAMOTI 2018

Valamoti, S.M., Brewing beer in wine country? First archaeobotanical indications for beer making in Early and Middle Bronze Age Greece, *Vegetation History and Archaeobotany* 27, 611–625. <https://doi.org/10.1007/s00334-017-0661-8>

VALAMOTI/ MARINOVA/HEISS 2019

Valamoti, S.M./Marinova, E./ Heiss, A.G., Prehistoric cereal foods of southeastern Europe: An archaeobotanical exploration, *Journal of Archaeological Science* 104, 97–113.

ZOHARY/HOPF 1988

Zohary, D./Hopf, M., *Domestication of plants in the old world: the origin and spread of cultivated plants in west Asia, Europe, and the Nile Valley* (Oxford: Clarendon Press; Oxford University).

