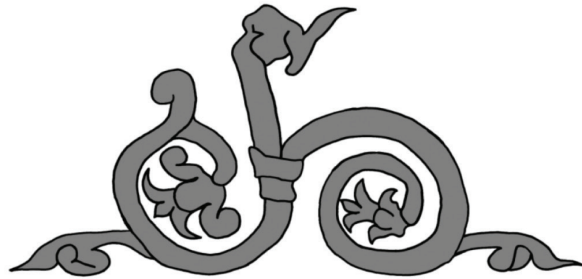


ZIRIDAVA
STUDIA ARCHAEOLOGICA

31
2017

MUSEUM OF ARAD



ZIRIDAVA
STUDIA ARCHAEOLOGICA

31
2017

Editura MEGA
Cluj-Napoca
2017

MUSEUM OF ARAD

EDITORIAL BOARD

Editor-in-chief: Peter Hügel.

Editorial Assistants: Florin Mărginean, Victor Sava.

EDITORIAL ADVISORY BOARD

V. Bărcă (Cluj-Napoca, Romania), M. Cărciumaru (Târgoviște, Romania), S. Cociș (Cluj-Napoca, Romania), F. Gogâltan (Cluj-Napoca, Romania), S. A. Luca (Sibiu, Romania), V. Kulcsár (Szeged, Hungary), M. Takács (Budapest, Hungary), J. O'Shea (Michigan, USA), K. Z. Pinter (Sibiu, Romania), I. Stanciu (Cluj-Napoca, Romania), I. Szatmári (Békéscsaba, Hungary).

In Romania, the periodical can be obtained through subscription or exchange, sent as post shipment, from Museum of Arad, Arad, Piata G. Enescu 1, 310131, Romania.
Tel. 0040-257-281847.

ZIRIDAVA STUDIA ARCHAEOLOGICA

Any correspondence will be sent to the editor:

Museum of Arad

Piata George Enescu 1, 310131 Arad, RO

e-mail: ziridava2012@gmail.com

The content of the papers totally involve the responsibility of the authors.

Layout: Francisc Baja, Florin Mărginean, Victor Sava

ISSN 2392-8786



EDITURA MEGA | www.edituramega.ro

e-mail: mega@edituramega.ro

Contents

Octavian Cristian Rogozea

- Discoveries Attributed to the Early Vinča Phase in Tărtăria “Gura Luncii” (Alba County). The 214
Preventive Archaeological Researches Performed on “Site 10B”.....7

Georgeta El Susi

- Animal Bones from the Neolithic (Szakálhát) Levels at Uivar (Timiș County).....29

Victor Sava, Florin Mărginean, Adrian Ursuțiu

- The Eneolithic Cemetery in Pecica “Est” (Arad County).....55

Tünde Horváth

- Budakalász, ein besonderer Bestattungsplatz der Badener Kultur. Kritische Anmerkungen zum Buch:
Mária Bondár – Pál Raczky (Red.): The Copper Age cemetery of Budakalász.....69

Tobias L. Kienlin, Klára P. Fischl, Liviu Marta

- Exploring Divergent Trajectories in Bronze Age Landscapes: Tell Settlement in the Hungarian Borsod
Plain and the Romanian Ier Valley.....93

Călin Ghemiș

- The Late Bronze Age Gold Ring Discovered in Betfia (Bihor County, Romania).....129

Liliana Daniela Mateescu-Suciu

- Glass Recipients from Sarmizegetusa Regia. *Unguentaria* and Bottles.....137

Horățiu Cocîș

- The Rural Landscape of the Frontier of Dacia Porolissensis. A Case Study: the Northern Sector –
territorium Arcoba(da)rense – The Valley of River Someșul Mare.....153

Norbert Kapcsos

- Sarmatian graves from Pecica Site 18. Remarks upon the phenomenon of „isolated” graves from the
Cris-Tisa-Mures region.....165

Ioan Stanciu

- On Early Medieval Roasting Trays and their Presence in the Settlements from the North-Western Part
of Romania181

Călin Cosma, Adrian Bolog, Ovidiu Oargă

- Avar Graves Recently Discovered in Gâmbaș (Alba County) on the Spot Called “Ogoarele de jos”195

Dan Băcuet-Crișan, Gruia Fazecaș, Doru Marta

- An Early Medieval Feature Discovered in Oradea – Salca “Ghețarie” (Petrom Gas Station).....215

Daniela Tănase, Gábor Bertók, Anita Kocsis, Balázs Major

- The location of Egres Cistercian monastery – Igrîș (Timiș County), in the light of recent geophysical research...229

Florin Mărginean, Zsolt Csók, Keve László, Victor Sava

- Unveiling History. Archaeological Excavations in the Fortress of Ineu (Arad County).....241

Dorel Micle, Bogdan Alin Craiovan, Andrei Stavilă, Octavian-Cristian Rogozea

- The Times before Fischer’s Furniture Store. The Preventive Archaeological Researches in Sfântul
Gheorghe Square 2–3, Timișoara (Timiș County).....279

Andrea Demjén, Florin Gogâltan

- The Ciuc-Ghimeș Quarantine (18th–19th Centuries). Archaeological Researches of the Former Customs
Point “Cetatea Rákóczy”.....301

- Abbreviations.....325

The Late Bronze Age Gold Ring Discovered in Betfia (Bihor County, Romania)*

Călin Ghemiș

Abstract: In November 2015, in the area of Betfia village, near Oradea was found incidentally an Late Bronze Age gold ring. Based on the typological characteristics, the ring can be included in the category of notched rings of Sarasau type dated in Late Bronze Age, – L.B.A. II- second part of the II-nd millennium B.C. Unfortunately despite of the fact that the spot of discovery was verified together with the discoverer no other information (or archeological materials etc) can be provided regarding the archaeological context of this discovery.

Keywords: Transylvania, metallurgy, gold, notched rings, exchange relations, Late Bronze Age.

Conditions of discovery

The item has been discovered with a metal detector in the forest of Betfia by Ioan Boroș from Haieu village on 05.XI.2015, in an area strongly disturbed by trenches, firing posts, and other fortification works from the Second World War (Fig. 1).



Fig. 1. Betfia-the area of discovery.

On 20.XI.2015 I checked the place of discovery in the company of Mr. Marinel Roșu from the Bihor Culture County Department and of the author of the discovery but we were unable to identify in the area any archaeological material that could connect the item under discussion here to any particular archaeological context. The only “discoveries”, beside an impressive number of trenches from the Second World War, were several pyrotechnic materials, pieces of metal plate, and other remains of the fighting that took place there.

The association of the prehistoric discovery with a Roman denarius can be attributed to its discovery by some soldier who found it by chance, a case far from singular¹; on the other hand one cannot

* English translation: Ana M. Gruia.

¹ For the Romanian area the best known case is that of the deposit in Apa, discovered by accident during the excavation of

exclude the possibility that the item was discovered in the times of old, though no discoveries have been made so far to attest the existence of some prehistoric settlement there. The closest spot with contemporary discoveries is the “fortification” in Mierlău² located ca. 7 km from the settlement of Betfia.

Item description

Ring/loop part of the wider category of notched rings, obtained through the thinning of the ends of a gold wire, after which the body of the item was decorated through incision and hammering. The section of the wire it was made of is round and the ends of the ring were overlapped and left undecorated. The item is very well made, out of very good quality gold.

Dimensions: Ø 17 × 16 mm, Ø maximum of the wire at 6 o'clock: 3 mm, Ø ends: 2 mm. Weight: 2.76 g. (Fig. 2, Fig. 3).

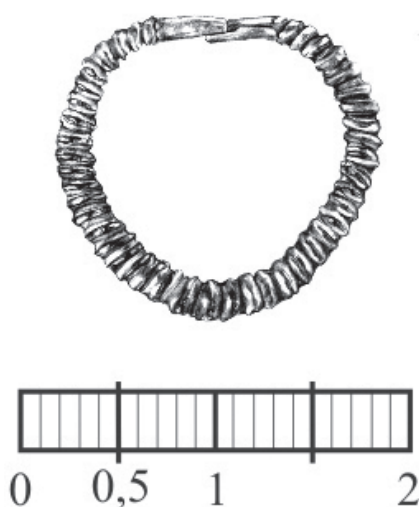


Fig. 2. The Betfia ring.



Fig. 3. The Betfia ring, enlarged image.

trenches in 1939, cf. Popescu, 1937–1940, 119–125. For other areas, see: Saunders 2010, 1–31, the author inventories a series of stray finds made during the “positional war” from the first world conflagration made by soldiers of the belligerent parties; in this context the author describes discoveries of prehistoric artifacts that ended up divided between those who found them. Due to the previous context I do not exclude the possibility that item found in Betfia was also discovered somewhere else, in some other context, and was part of a soldier’s “treasure”.

² The spot is mentioned in the existing literature but it has not been clearly identified. Two bracelets, made of bronze, lozenge-shaped in section, decorated, were apparently found there – the objects are the topic of a material under print.

Discussions

The origin of the gold from which the item has been made of remains unknown for now, but as indicated by the last analyses that have been published³ it is alluvial gold. Its reddish-yellow color also supports this identification. As for the production technique, specialists thought for a long time that this type of items was created through the lost wax method, but the recent publication of the hoard from Braşov II, through the extremely detailed analysis of the items, has fully clarified, I believe, this dilemma by revealing the fact that the type was made through casting.⁴

The typological characteristics of the item support its dating to the final stage of the Bronze Age and the First Iron Age. Its analogies are to be found among hoards, deposits of bronzes associated with gold items, or stray finds from the following locations: Bătarci⁵, Cornăţel⁶, Coruia⁷, Gemzse-Egetterdo⁸, Ieud⁹, Lăpuş¹⁰, Moftinu Mic¹¹, Olcsvaapati II¹², Rupea¹³, Sarasău¹⁴, Sarmizegetusa¹⁵, Seini¹⁶, Sighet¹⁷, Szarazsadany¹⁸, Şmig¹⁹, Tăuteu²⁰, Târgu-Mureş²¹ and Volovec²² dated to an extended period between the end of the Bronze Age and the end of the first stage of the Iron Age (Fig. 4).

Among the enumerated discoveries, only in the case of those from Lăpuş one can state with certainty the conditions of discovery, as the rest were part of hoards, mixed deposits²³, or stray finds, most often discovered in almost unknown conditions.

The authors of the first synthesis works regarding the metallurgy of gold in Transylvania, D. Popescu²⁴ and M. Rusu²⁵, have noted the high number of notched rings and have created typologies for them and have implicitly made slightly narrower chronological identifications.

The general conclusion of the two researchers in question is that these items started their development during the Final Bronze, reached Halstatt, and even continued beyond this latter stage. The most recent items are those dated to Hallstatt B – the Brăduţ-type rings.

The arguments put forward in support of these datings were in most cases morphological and based on the association of items and less on morphometric considerations.

Publishing the discoveries from Nyiregyhaza and Sarasău, Amalia Mozsolics has also analyzed several contemporary discoveries, such as those in Bodrogszadany/Sarazsadany (Abauj County), Căţăluşa (Sălaj County), the former county of Maramureş, Gemzse-Egetterdo, Olcsvaapati, Rozsaly, Takos, and

³ Țârlea et al. 2016, 53–83.

⁴ Țârlea et al. 2015, 45–90.

⁵ Macrea, Kacso 1972, 101–112, Taf. 20–25.

⁶ Macrea, Kacso 1972, 101–112, Taf. 20–25.

⁷ Foltiny 1968, 703–711.

⁸ Kacso 2006, 76–123.

⁹ Kacso 1981, 371–381, the author does not exclude the possibility that some of the hoards discovered in the area, in Sighet or in “Maramureş County” and mentioned in the existing literature were in fact part of the great hoard from Sarasău.

¹⁰ Kacso 1981, 9; Kacso 2001, 231–278.

¹¹ Kacso 1981, 376.

¹² Mozsolics 1966, 15–33, two notched rings were discovered associated with several bronze items. Dimensions: ring 1 – Diam.: 2.80 cm, 5.99 g; ring 2 – Diam. 2.00 cm, 3.46 g.

¹³ Mozsolics 1950, 30.

¹⁴ Mozsolics 1966, 15–33, for the lot acquired by the National Hungarian Museum in Budapest. For the items from Romania, see: Kacso 1981, 371–381.

¹⁵ Mozsolics 1950, 30.

¹⁶ Roska 1942, 275, no. 233.

¹⁷ Foltiny 1968, 703–711.

¹⁸ Mozsolics 1950, Taf. XI.

¹⁹ The MNIR preserves in its collections part of the hoard from Şmig that includes two notched rings, cf. Țârlea, Popescu 2013a, 48–62, with the old bibliography on this discovery.

²⁰ Țârlea, Popescu 2013b, 225, Cat. no. 35.

²¹ Rusu 1972, 29–63.

²² Kacso 2006, 83.

²³ See supra footnote no. 5.

²⁴ Popescu 1956, 196–250.

²⁵ Rusu 1972, 29–52.

Vasarosnameny and based on the association between the types of items she has concluded that they are to be dated during the period of the Opaly Horizon, i.e. in the end of period BIV.²⁶

Besides, the Hungarian researcher in question is the only one to provide metric data of the published items, thus making their study considerably easier.

Discussing the items preserved in Romania that were part of the Sarasău hoard, in 1981 C. Kacso introduced in the archaeological literature the term “Sarasău-variant notched rings”²⁷, thus nuancing the wider typology of notched rings.

Based on the analogies and on the association of items in hoards and bronze deposits, the author in question reached the conclusion that the Sarasău variant of notched rings represents the oldest type and included it in the first phase of the Uriu-Oplay-type deposits, contemporary to the first phase of the necropolis in Lăpuş²⁸.

The oldest notched rings seem to be, indeed, those from Lăpuş, especially when taking into consideration their association with massive disk-butted bronze axestype B₃-B₄ discovered in this necropolis in tumuli 2 and 4²⁹.

This is not the place for me to discuss each discovery individually considering the length limitations of the present study, but I shall just mention the fact that the association of notched rings with rings rectangular in section in the hoard from Sarasău supports their use during the Final Bronze.

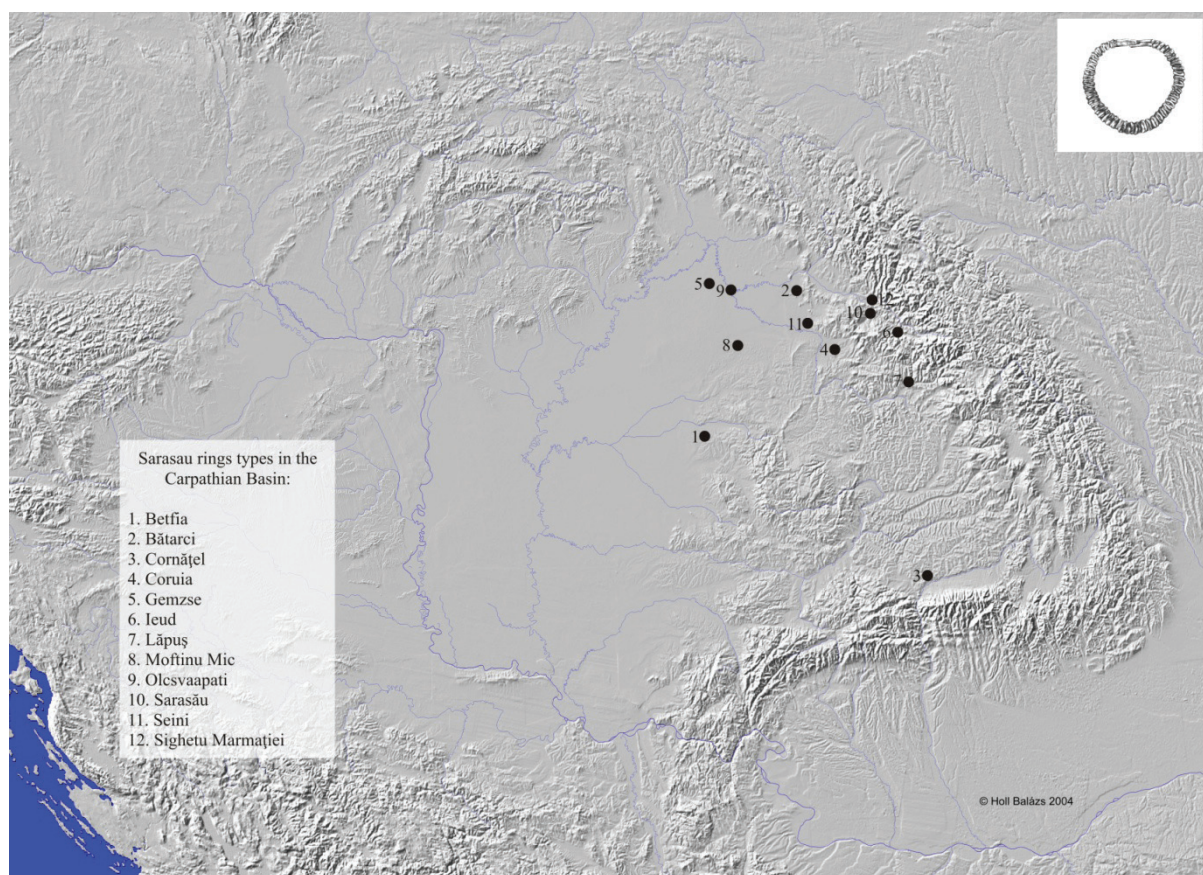


Fig. 4. Sarasău rings types in the Carpathian Basin.

During the subsequent stage, i.e. Halstatt A, notched rings continued to be used, a fact proven by the discoveries from Somotor³⁰ (Slovakia) and Gemzse-Egeterdo³¹, but their shape and dimen-

²⁶ Mozsolics 1966, 33.

²⁷ Kacso 1981, 375.

²⁸ Kacso 1981, 375.

²⁹ Kacso 1981, 10.

³⁰ Pastor 1958, 314–332, Fig. III, notched ring, Fig. VII, nos. 11–19 rings/loops of the Brăduţ type.

³¹ Mozsolics 1966, 26, Abb. 9; Abb. 11 mixed deposit, associating three types or rings/loops: lozenge-shaped in section, one ring of the Sarasău type and Brăduţ-type ring, the earlier variant, only decorated with notches.

sions changed substantially, in that the ends of such objects were much pointier and the notches were superficially made with a very sharp punch and, at least for some of these rings, the fineness of the gold was higher³². During this period, towards its end, one notes the introduction of a new type of items, namely the Brăduț-type rings/loops, the oldest of them being, as mentioned above, the items from Somotor and Gemzse Egeterdo, dated to the eleventh century B.C.³³

From a typological perspective, the shape of the items changed substantially. They became slimmer and the only “inheritance” or tradition preserved from the previous stage is the decorative technique: the notches covering the entire surface.

The association of Brăduț-type rings with notched rings in the deposit from Tăuteu³⁴, dated later, leads one to conclude that the two types were contemporary at least for a period and were used in parallel.

If things are clear on the issue of the dating of the item from Betfia, considering the analogies mentioned above, just like its chronological identification to Late Bronze II, (the fourteenth-thirteenth centuries B.C.)³⁵, the same cannot be said about its function.

From an artistic perspective, these items belong to a rather sophisticated fashion and were certainly part of a visual system of communication the meaning of which remains, as yet, unclear.

One cannot exclude the possibility that these items were part, beside other objects or primary materials, of a pre-monetary system. The topic has been often approached during recent years³⁶ but one should look for its historiographic origin during the Romantic period of archaeology that marks the first references to a pre-monetary system among the old populations.

The fact that since the first approaches of the hoard from Brăduț Carl Goos noted the high quality of the gold of the 25 rings/loops, among which he noted those made of electron, is significant for Transylvania. Regarding these items, Goos made a special observation, based on weighing the electron items, namely the fact that these were close in weight: 2.1 g, 2.3 g, 2.7 g, 2.75 g, and 3.4 g. He believed these were “Tauschmittel (Geld-surrogat)”, in other words mediums of exchange³⁷.

More than a century and a half after the publication of Goos’ book, B. Mitrea published a study that is extremely valuable, not only through the approached topic, that of the so-called *annular coins*, but especially through the fact that he is the first to systematize the older literature on the topic.³⁸

Though the subject is approached from the perspective of a numismatist, one must reveal several aspects of this study. Thus Mitrea repertoried a number of 44 item discoveries (of all types), among which only seven are located in the extra-Carpathian region, the rest inside the Carpathian Arch³⁹. This made Mitrea conclude that these items were specific to Transylvania, especially since the most numerous gold deposits are located there⁴⁰.

He also remarks upon the fact that the introduction of such items that were meant to be exchanged was not an indigenous phenomenon, but a creation of Asia Minor from where they spread towards Europe⁴¹.

Analyzing the articles published by M.C. Sutz⁴² and K. Pink⁴³, Mitrea stressed once more the difficulty of establishing a weight standard for such items, but one must note the fact that the author

³² Țârlea et al. 2016, 53–83.

³³ Zdenek 1988, 39–42.

³⁴ Țârlea, Popescu 2013b, 225, Cat. no. 35, with the old bibliography; the deposit discovered in 1934 included five rings, among which three of the Brăduț type and two notched rings, of varying dimensions: ring 1 – Diam. 5.50 cm, 10.22 g; ring 2 – Diam. 3.35 cm, 7.20 g; ring 3 – Diam. 3.33 cm, 5.90 g; ring 4 – Diam. 3.06 cm, 2.44 g; ring 5 – Diam. 2.05 cm, 2.44 g.

³⁵ Gogâltan 2001, 191–215.

³⁶ To this end see: Ciugudean 2010, 23–40.

³⁷ Goos 1876, 12 sq.

³⁸ Mitrea 1937–1940, 147–158.

³⁹ This is also the place to correct an error that does not lessen the value of the study signed by the numismatist from Bucharest: he erroneously places the settlement of Aștileuin Bihor County, following Floris Romer and Carl Goos. Romer 1868, 187, no. 1001, speaks of the settlement of Eskulo located in the county of Doboka (partially the present-day county of Cluj), and a bit later Carl Goos speaks of the settlement of Eskulpe that he places in the same county, cf. Goos 1876, 20, as this is the settlement of Așchileu Mare in Cluj County.

⁴⁰ Mitrea, 1940, 147.

⁴¹ This theory has also been verified in the last years, cf. Ciugudean 2010, 23–40.

⁴² Sutz 1883, 1–16.

⁴³ Pink 1928, 1–11.

criticized the attempts to compare the prehistoric items from Turnu Măgurele published by Sutz and the standard weights of Cyzic for example.

After V. Pârvan, Dorin Popescu did not exclude the possibility that at least part of the notched rings fulfilled the role of coins, but he approached this hypothesis with extreme caution⁴⁴.

Amalia Mozsolics, possibly one of the finest specialists of the metallurgy of gold in Central Europe, also stressed in 1973 the fact that one cannot set one or more standard units for the gold and bronze items of the Late Bronze. Nevertheless, she did not exclude the possibility that some of the rings/loops, made either of bronze or of gold, had a pre-monetary function as well, as that of “Ringgeld”⁴⁵.

By comparing the hoards from Cugir, Hinova, Firiteaz, and Sacoșu Mare H. Ciugudean was able to identify, for the first time, at least two weight standards in three hoards, one comparable to the world of the Middle East and the other to the Egyptian world. According to Ciugudean both were introduced to Europe via the “amber road”⁴⁶ and this reality cannot be excluded, though only taking into consideration the commerce with amber, for example, that became international in the end of the Bronze Age⁴⁷.

Discussing the hoard from Căuaș, C. Kacso accept that part of the loops that are lozenge-shaped in section was part of a pre-monetary system, stressing the fact that the bracelets part of the hoard rather had the role of ingots⁴⁸.

The final contribution related to the functionality of notched rings belongs to the team coordinated by Alexandra Țârlea. In her presentation of the hoard from Brașov II, based on the analysis of the weight of the items, Țârlea excluded the possibility that they were part of a pre-monetary system and rather believed they were used as jewelry items⁴⁹.

From the opinions expressed above one can conclude that the majority of researchers who have dealt with the gold discoveries in the intra-Carpathian area does not exclude the possibility that the rings with lozenge-shaped section, notched rings, and Brăduț-type rings were part of a pre-monetary system and the only problem is to establish one or several standard weights that were common or at least similar.

H. Ciugudean’s researches have opened the way to some reinterpretations on the topic, but on the other hand if the direction of analysis of these items is to create a typology or a strict standardization then certain meanings of the utility of these items are lost.

The following question arises naturally in connection to the interpretation of the items: how can one explain the introduction of items “tied together” or attached to a chain? The phenomenon has been noted ever since the Middle Bronze and continued until the First Iron Age.

M. Mauss’ statement could provide an explanation: “*The bracelets and collars of the Trobriand population, vaygu’a, just like the copper items of the American North-West or the Iroquiawampun are at the same time treasures, indicators of wealth, means of exchange or payment, and also objects that must be given or destroyed*”⁵⁰, in other words part of the items of prestige that include those under analysis here are or were part of an economy of the gift that the same French sociologist has best exemplified, in my opinion: “*the archaic form of exchange: the gift offered and the return of the received gift*”⁵¹.

Much more could be said on this vast issue, of course, but as a general conclusion I believe that until future approaches such items must be included in the wider category of what Ferenc Kiss labeled “Schmuck-Ringelder”⁵², i.e. jewelry items/rings/coins or in literary translation, objects of adornment and exchange.

Naturally, future researches shall bring new explanations regarding the function of these rings/loops, as my intention here has been to present the type of item in a wider context.

⁴⁴ Popescu 1956, 196–250.

⁴⁵ Mosolics 1973, 97 sq.

⁴⁶ Ciugudean 2010, 23–40.

⁴⁷ The most recent pinion on amber traffic in: Gogăltan 2016, 143–171.

⁴⁸ Kacso 2014, 105–123.

⁴⁹ Țârlea et al. 2015, 45–90.

⁵⁰ Mauss 1997, 211.

⁵¹ Mauss 1997, 156.

⁵² Kiss 1859, 15–18. Even if the study has the inherent drawback of its era, the author has the merit of having introduced this term that I believe best connects the types of items under discussion here.

Acknowledgements

This article would not have been possible without the support of my friend and colleague Victor Sava who has created the map of ring discoveries and without the advice of Dr. Florin Gogâltan, as lecturer of the work.

Călin Ghemiș

“Țara Crișurilor” Museum, Oradea
Oradea, ROU
ereshu@yahoo.com

BIBLIOGRAPHY

- Ciugudean 2010 H. Ciugudean, *Piese de aur din depozitul de la Cugir și relația lor cu sisteme metrologice din bronzul târziu*. *Apulum* XLVII, 2010, 23–40.
- Foltiny 1968 S. Foltiny, *Einige Spätbronzezeitliche Goldfunde aus Siebenbürgen im Naturhistorischen Museum*. *AnnNaturHistorMusWien* 72, 1968, 703–711.
- Gogâltan 2001 F. Gogâltan, *The settlement of Cășeu and some problems concerning the Late Bronze Age in Center and Northern Transylvania*. In: C. Kacsó (Hrsg.), *Der Nordkarpatische Raum in der Bronzezeit*. Baia Mare 2001, 191–215.
- Gogâltan 2016 F. Gogâltan, *Chihlimbarul preistoric de la frontieră estică a Bazinului Carpatic*. *AnB S.N.* XXIV, 2016, 143–171.
- Goos 1876 C. Goos, *Chronik der Archäologischen Funde Siebenbürgens*. Hermannstadt/Sibiu 1876.
- Kacso 1981a C. Kacso, *Date noi cu privire la tezaurul de aur de la Sarasău*. *SCIV(A)* 32, 3, 1981, 371–381.
- Kacso 1981b C. Kacso, *Necropolatumulă de la Lăpuș*. Doctoral dissertation abstract. Cluj-Napoca 1981.
- Kacso 2001 C. Kacso, *Zur Chronologischen und Kulturellen Stellung des Hügelgraberfeldes von Lăpuș*. In: C. Kacsó (Hrsg.), *Der Nordkarpatische Raum in der Bronzezeit*. Baia Mare 2001, 231–278.
- Kacso 2006 C. Kacso, *Bronzefunde mit Goldgegenständen im Karpatenbecken*. In: J. V. Kobal' (Hrsg.), *Bronzezeitliche Depotfunde-Problem der Interpretation: Materialien der Festkonferenz für Tivodor Lehoczy zum 175. Geburtstag*, Uzhorod, 5.–6. Oktober 2005. Uzhorod 2006, 76–123.
- Kacso 2014 C. Kacso, *Date noi cu privire la tezaurul de aur din epocabronzului de la Căuș*. *StComSatu Mare* XXX/1, 2014, 105–123.
- Kiss 1859 F. Kiss, *Die Zahl und Schmuck-Ringegelder*. Pest 1859.
- Macrea, Kacso 1972 M. Macrea, C. Kacso, *Depozitul de bronzuri de la Bătarci*. *StComSatu Mare*, 1972, 101–112, Taf. 20–25.
- Mauss 1997 M. Mauss, *Eseudespredar*. Iași 1997.
- Mozsolics 1950 A. Mozsolics, *Der Goldfund von Velem-Szentvid*. Ein Beitrag zur Metallkunst der älteren Hallstattzeit, *Praehistorica*, I. Basel 1950.
- Mozsolics 1966 A. Mozsolics, *Die Goldfunde von Nyiregyháza und Szarvassó*. *ActaArchHung* 18, 1966, 15–33.
- Mozsolics 1973 A. Mozsolics, *Bronze – und Goldfunde des Karpatenbeckens. Depotfundhorizonte von Forro und Opaly*. Budapest 1973.
- Mitrea 1940 B. Mitrea, *Il problema delle monete anelli della Dacia*. *Dacia* VII–VIII, 1937–1940, 147–158.
- Pastor 1958 J. Pastor, *Siedlungsforschung auf der Somotorskahora*. *SlovArch*, VI, 2, 1958, 314–332.
- Pink 1928 K. Pink, *Goldstabringe aus Dakien*. *Numismatische Zeitschrift* 61, 1928, 1–11.
- Popescu 1940 D. Popescu, *Depot de bronzes de Apa*. *Dacia* VII–VIII, 1937–1940, 119–125.
- Popescu 1956 D. Popescu, *Prelucrarea aurului în Transilvania înainte de cucerirea romană*. *Materiale și Cercetări Arheologice* II, 1956, 196–250.

- Romer 1868 F. Romer, *Magyar regeszeti kronika osszealita*. Archaeologiai Kozlemenyek VII, 1868, 181–199.
- Roska 1943 M. Roska, *Erdely Regeszeti Repertoriuma*. Kolozsvár/Cluj 1942.
- Rusu 1972 M. Rusu, *Considerații privind metalurgia aurului în Transilvania în Bronz D și Halsstatt* A. AMN IX, 1972, 29–63.
- Saunders 2010 N. J. Saunders, *Killing Time. Archaeology and the First World War*. Stroud, Gloucestershire 2010.
- Sutzu 1883 M. C. Sutzu, *Tezaurul de la Turnu Măgurele*. Revista pentru istorie, arheologie și filologie I, 1883, 1–16.
- Țârlea, Popescu 2013a A. Țârlea, A. D. Popescu, – *Aurul și argintul în Epoca Bronzului și Prima Epocă a Fierului*. In: Rodica Oanță-Marghitu (Ed.), *Aurul și Argintul Antic al României*. București 2013, 48–62.
- Țârlea, Popescu 2013b A. Țârlea, A. D. Popescu, *Depozitul de la Tăuteu*. In: Rodica Oanță Marghitu (Ed.), *Aurul și Argintul Antical României*. București 2013, 225, Cat.no. 35.
- Țârlea et al. 2015 A. Țârlea, C. Tătaru, M. Florea, M. Georgescu, Z. Baltă, *The Early Iron Age Gold Treasure from Brașov*. Peuce SN XIII, 2015, 45–90.
- Țârlea et al. 2016 A. Țârlea, V. Cojocaru, B. Constantinescu, R. Bugoi, M. Florea, *Considerations on the XRF analyses on selected prehistoric objects from the collections of National History Museum of Romania*. SCIV(A) 67,1–2, 2016, 53–83.
- Zdenek 1988 F. Zdenek, *Somotor. Klenoty davne jminulosti Slovenska*. Bratislava 1988, 39–42.

Abbreviations

AAASH	Acta Archaeologica Academiae Scientiarum Hungaricae. Budapest.
Acta Ant et Arch Suppl	Acta Antiqua et Archaeologica Supplementum. Szeged.
AAC	Acta Archaeologica Carpathica. Krakow.
ACMIT	Anuarul Comisiunii monumentelor istorice. Secția pentru Transilvania. Cluj.
ARA	Annual Review of Anthropology. Stanford.
ActaArchHung	ActaArchHung Acta Archaeologica Academiae Scientiarum Hungaricae. Budapest.
AEM	Archäologische Epigraphische Mitteilungen aus Österreich-Ungarn. Heidelberg.
AIIA Cluj	Anuarul Institutului de Istorie și Arheologie. Cluj-Napoca.
AISC	Anuarul Institutului de Studii Clasice. Cluj-Napoca.
AMP	Acta Musei Porolissensis. Zalău.
ATF	Acta Terrae Fogarasiensis. Făgăraș.
ATS	Acta Terrae Septemcastrenses. Sibiu.
Agria	Agria. Annales Musei Agriensis. Az egri Dobó István Vármúzeum évkönyve. Eger.
AnB S.N.	Analele Banatului. Timișoara.
AMS.CEU	Annual of Medieval Studies at CEU. Budapest.
ACN	Archaeological Computing Newsletter. Florence.
ArchÉrt	Archaeologiai Értesítő. A Magyar Régészeti és Művészettörténeti Társulat tudományos folyóirata. Budapest.
ArchJug	Archaeologia Iugoslavica. Beograd.
ArhPregled	Arheološki Pregled. Arheološko Društvo Jugoslavije. Beograd.
ArchSlovCat	Archaeologia Slovaca Catalogi. Bratislava.
Archaeológiai Közlemények	Archaeológiai Közlemények. A hazai Műemlékek Ismeretének Előmozdítására. Budapest.
ArchKorr	Archäologisches Korrespondenzblatt. Mainz.
ArhMold	Arheologia Moldovei. Iași.
AMN	Acta Musei Napocensis. Cluj-Napoca.
AMP	Acta Musei Porolissensis. Zalău.
ArchRozhl	Archeologické Rozhledy. Praga.
ArhMed	Arheologia Medievală. Cluj-Napoca, Brăila, Reșița.
ASMB	Arheologia Satului Medieval din Banat. Reșița 1996.
AVSL	Auftrage des Vereins für siebenbürgische Landeskunde, Wien.
Banatica	Banatica. Reșița.
BAM	Brvkenthal Acta Mvsei. Sibiu.
BAR Int. Ser.	British Archaeological Reports. International Series. Oxford.
BCMI	Buletinul Comisiunii Monumentelor Istorice. București.
BCȘS	Buletinul Cercurilor Științifice Studențești. Arheologie – Istorie – Muzeologie. Alba Iulia.
BG	Botanical Guidebooks. Kraków.
BerRGK	Bericht der RömischGermanischen Kommission. Frankfurt a. Main.
BHAB	Bibliotheca Historica et Archaeologica Banatica. Timișoara.
BHAUT	Bibliotheca Historica et Archaeologica Universitatis Timisiensis. Timișoara.
BMB. SH	Biblioteca Muzeului Bistrița. Seria Historica. Bistrița Năsăud.
BMÉ	Bihari Múzeum Évkönyve. Berettyóújfalú.
BMI	Buletinul Monumentelor Istorice. București.
BMN	Bibliotheca Musei Napocensis. Cluj-Napoca.
BMMK	A Békés Megyei Múzeumok Közleményei. Békéscsaba.
BMMN	Buletinul Muzeului Militar Național. București.
BThr	Bibliotheca Thracologica. Institutul Român de Tracologie. București.

CAB	Cercetări Arheologice în București. București.
CAH	Communicationes Archaeologicae Hungariae. Budapest.
Carpica	Carpica. Muzeul Județean de Istorie și Arheologie, Bacău.
CAMNI	Cercetări Arheologice. Muzeul de Istorie al R. S. România/Muzeul Național de Istorie. București.
CIL	<i>Corpus Inscriptionum Latinarum</i> . Berlin.
CCA	<i>Cronica cercetărilor arheologice (din România)</i> , 1983-1992 <i>sqq.</i> (și în variantă electronică pe http://www.cimec.ro/scripts/arh/cronica/cercetariarh.asp).
Classica et Christiana	Classica et Christiana. Iasi.
CRSCRCR	Coins from Roman sites and collections of Roman coins from Romania. Cluj-Napoca.
Crisia	Crisia. Muzeul Țării Crișurilor, Oradea.
Dacia N.S.	Dacia. Revue d'archéologie et d'histoire ancienne. Nouvelle serie. București.
Danubius	Danubius - Revista Muzeului de Istorie Galați. Galați.
DDME	A Debreceni Déri Múzeum Évkönyve. Debrecen.
DolgCluj	Dolgozatok az Erdélyi Nemzeti Érem- és Régiségtárából, Klozsvár (Cluj).
DolgSzeg	Dolgozatok. Arbeiten des Archäologischen Instituts der Universität. Szeged.
EphNap	Ephemeris Napocensis. Cluj-Napoca.
EMEÉ	Az Erdélyi Múzeum-Egyesület Évkönyve. Cluj-Napoca.
EMÉ	Erdélyi Múzeum Évkönyve. Cluj-Napoca.
EAZ	Ethnographisch-Archäologische Zeitschrift. Berlin.
FADDP/GMADP	Führer zu archäologischen Denkmälern in Dacia Porolissensis/Ghid al monumentelor arheologice din Dacia Porolissensis. Zalău.
File de Istorie	File de Istorie. Bistrița.
FolArch	Folia Archaeologica. Budapest.
Forsch. u. Ber. z. Vor- u. Frühgesch. BW	Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg.
GPSKV	Gradja za proučavanje spomenika kulture Vojvodine. Novi Sad.
GSAD	Glasnik Srpskog Arheološkog Društva. Beograd.
HOMÉ	A Herman Ottó Múzeum Évkönyve. Miskolc.
HTRTÉ	Hunyadvármegye Történelmi és Régészeti Társulat Évkönyve. Déva (Deva).
JAMÉ	A nyíregyházi Jósza András Múzeum Évkönyve. Nyíregyháza.
JahrbuchRGZM	Jahrbuch des RömischGermanischen Zentralmuseums Mainz.
JAHA	Journal of Ancient History and Archaeology. Cluj-Napoca.
Lohanul	Lohanul. Revistă culturală științifică. Huși.
MCA	Materiale și Cercetări Arheologice. București.
MCA-S.N.	Materiale și Cercetări Arheologice-Serie Nouă. București.
MA / MemAnt	Memoria Antiquitatis. Piatra Neamț.
MFMÉ	A Móra Ferenc Múz. Évkönyve. Szeged.
MFMÉ StudArch	A Móra Ferenc Múzeum Évkönyve, Studia Archaeologica. Szeged.
MN / MuzNat	Muzeul Național. București.
NumAntCl	Numismatica e antichitàclassiche. Milano.
Opitz Archaeologica	Opitz Archaeologica. Budapest.
Opuscula Hungarica	Opuscula Hungarica. Budapest.
OM	Orbis Mediaevalis. Arad, Cluj-Napoca.
OTÉ	Orvos- Természettudományi Értesítő, a Kolozsvári Orvos-Természettudományi Társulat és az Erdélyi Múzeum-Egylet Természettudományi Szakosztálya.
Palaeohistorica	Acta et Communicationes Instituti Archaeologici Universitatis Groninganae.
PamArch	Památky Archeologické. Praha.
Past and Present	Past and Present. Oxford.
PIKS/PISC	Die Publikationen des Institutes für klassische Studien/ Publicațiile Institutului de studii clasice. Cluj-Napoca.
PBF	Praehistorische Bronzefunde. Berlin.
PMÉ	Acta Musei Papensis – Pápai Múzeumi Értesítő.
PZ	Prähistorische Zeitschrift. Berlin.

ReDIVA	Revista Doctoranzilor în Istorie Veche și Arheologie. Cluj-Napoca.
Revista Bistriței	Revista Bistriței. Bistrița.
RevMuz	Revista Muzeelor. București.
RIR	Revista Istorică Română.
RMM-MIA	Revista Muzeelor și Monumentelor. Seria Monumente istorice și de artă. București.
RMMN	Revista Muzeului Militar Național. București.
RESEE	Revue des Études Sud-Est Européennes. București.
Ruralia	Ruralia. Památky Archeologické – Supplementum. Praha.
RVM	Rad Vojvodjanskih Muzeja. Novi Sad.
Sargetia	Sargetia. Muzeul Civilizației Dacice și Romane, Deva.
Savaria	Savaria. A Vas megyei Múzeumok Értesítője. Szombathely.
SCIV(A)	Studii și Cercetări de Istorie Veche. București.
SCN	Studii și Cercetări Numismatice. București.
SlovArch	Slovenská Archeológia. Nitra.
SIA	Studii de Istoria Artei. Cluj Napoca.
SIB	Studii de istorie a Banatului. Timișoara.
SKMÉ	A Szántó Kovács János Múzeum Évkönyve. Orosháza.
SMIM	Studii și Materiale de Istorie Medie. București.
SMMA	Szolnok Megyei Múzeumi Adattár. Szolnok.
SMMIM	Studii și Materiale de Muzeografie și Istorie Militară. București.
Starinar	Starinar. Arheološki Institut. Beograd.
Stratum plus	Stratum plus. Archaeology and Cultural Anthropology. Kishinev.
StCl	Studii Clasice. București.
StComBrukenthal	Studii și comunicări. Sibiu.
StudArch	Studia Archaeologica. Budapest.
StudCom	Studia Comitatus. Szentendre.
Studii și Comunicări	Studii și Comunicări. Arad.
StudUnivCib	Studia Universitatis Cibiniensis. Sibiu.
StudCom – Vrancea	Studii și Comunicări. Muzeul Județean de Istorie și Etnografie Vrancea. Focșani.
StudŽvest	Študijne Zvesti Arheologického Ústavu Slovenskej Akadémie Vied. Nitra.
Symp. Thrac.	Symposia Thracologica. București.
Századok	Századok. A Magyar Történelmi Társulat Folyóirata. Budapest.
TIR L34	D. Tudor, <i>Tabula Imperii Romani</i> . București 1965.
Tempora Obscura	Tempora Obscura. Békéscsaba 2012.
Tibiscus	Tibiscus. Timișoara.
VAH	Varia Archaeologica Hungarica. Budapest.
VIA	Visnik Institutu arkheolohii. L'viv.
Ziridava	Ziridava. Arad.
ZSA	Ziridava Studia Archaeologica. Arad.
w.a.	without author