

A "Necklace" Made of Gold Rings Discovered within the Radius of Braşov Municipality, Braşov County

Florin MOŢEI¹

Abstract. *The main objective of the present study is to bring to light a small treasure discovered in 2014, near the city of Braşov, dated in Halstatt B1 and consisting of four indented links of the Brăduţ type. The treasure is analyzed along with other similar discoveries from Transylvania. The links were researched in order to determine the specific characteristics regarding decoration, weight, dimensions, shape, technology, decoration techniques, and metallographic composition.*

Rezumat. *Principalul obiectiv al prezentului studiu de faţă este cel de ilustrare a unei mici comori descoperite în anul 2014, în apropierea municipiului Braşov, datată în Halstatt B1 şi formată din patru verigi indentate de tip Brăduţ. Comoara este analizată alături de alte descoperiri similare din Transilvania. Piese în cauză au fost investigate în vederea determinării caracteristicilor specifice privind decorarea, greutatea, dimensiunile, forma, tehnologia, tehnicile de decorare şi compoziţia metalografică.*

Keywords: treasure, Early Iron Age (Hallstatt B1), notched Brăduţ-type rings, characteristics.

In February 2014, a small treasure consisting of four gold rings decorated with indentations was brought to the Braşov County Museum of History, the pieces being purchased, studied, photographed, drawn, and spectrographically analyzed. In the records of the Braşov County Museum of History, the treasure can be found in the Archeology Inventory Register under inventory number II 8350 AR-1,2,3,4.

The treasure was discovered with the metal detector in a wooded area, located approximately 100 m to the left of the road that connects Braşov municipality with Poiana Braşov (45°37'35.1' N 25°33'32.8' E) (Pl. 1/A-B)².

Later, during March 2014, a second hoard consisting of twenty-two indented gold rings was discovered by Mr. Fănel Şerban on the western slope of Frasinului Hill (altitude 777.5 m) in the southern part of the Prund-Schei neighborhood, approximately 1,120 m (Pl. 5) away from the hoard that is the subject of this study³. Initially, the treasure was brought to the Braşov County Museum of History, but the management at that time declined its acquisition, the pieces reaching the National History Museum of Romania, where they were researched and published⁴.

The pieces discovered in the two hoards fall into the category of the Brăduţ type, named after the eponymous discovery made in 1858 in the village of Brăduţ, Tălişoara commune, Covasna County⁵.

¹ Braşov County Museum of History; florinmotei@yahoo.com.

² The pieces were discovered by Mr. Fănel Şerban with a Garrett AT PRO International metal detector.

³ ŢÂRLEA *et alli* 2015, 45-46.

⁴ ŢÂRLEA *et alli* 2015, 45-46.

⁵ POPESCU 1956, 228; 1962, 410; PETRESCU-DÎMBOVIŢA 1977, 127.

Rings of this type have the characteristic cross-section and roundness of the bar, as well as a thinning of the ends, but also the decoration on the entire surface consisting of parallel notches arranged on the entire surface⁶.

Cluj-based researcher M. Rusu differentiates three types of indented bracelets⁷:

- the Meseşeni version (the entire surface, except for the ends, is decorated with equal vertical notches, and the bar of the bracelet has a round section);
- the Şona variant (with similar notches, except for the inner face of the bracelet, so that the resulting cross-section of the metal bar is in the form of the letter D);
- the Recaş variant (the notches are oblique on the smooth inner surface of the bracelet, and the cross section of the metal bar has the shape of the letter D)⁸.

All three types are round in shape and are made of thin gold thread, decorated on the entire surface, excepting the ends, thin and pointed, close to each other or slightly overlapping⁹.

On the territory of Romania, five discoveries were made consisting of ring objects belonging to the Brăduţ type (Pl. 6), to which the discussed discovery is added.

1. Apoldu de Sus (Miercurea Sibiului, Sibiu County; Pl. 6/1). In 1843, eighteen indented gold rings of the Brăduţ type were discovered¹⁰. The rings, which are currently part of the heritage of the National History Museum of Romania, were linked together in the form of a chain that weighs 75.27 g and is approximately 34 cm long and can be dated to Hallstatt B1 (10th century BC. Chr.)¹¹. The rings are arranged in a chain in relative order of size, with the largest element at one end and the smallest at the other end.

2. Brăduţ (Tălişoara commune, Covasna County; Pl. 6/2). The deposit from Brăduţ (Tălişoara) was found in 1858 and entered the collections of the Natural History Museum in Vienna in 1899. The treasure included: two boilers; six axes; two sickles; a sword fragment; two bronze rings; bronze ingots; 25 gold rings. The hoard was dated to Hallstatt B1, the Moigrad – Tăuteu hoarding horizon, based on the characteristics of the bronze objects¹².

3. Unknown place in Bihor County. The pieces were discovered in the 19th century as part of a warehouse that included axes, knives, hammers and spearheads¹³. The five rings are interpreted by V. Pârvan as "silly rings"¹⁴. The "necklace" consists of a larger ring, with overlapping ends, to which are attached, through a thinner ring, four rings of the same size, with overlapping ends¹⁵. According to its composition, the hoard most likely belonged to Hallstatt B1 (10th century BC).

4. Braşov (Braşov county; Pl. 6/4). The Braşov II¹⁶ hoard consists either of 22 separate pieces or of groups of rings attached to each other¹⁷. When the hoard was handed over to the

⁶ POPESCU 1956, 228.

⁷ RUSU 1972, 35-36, Pl. III/1-7.

⁸ RUSU 1972, 35-36, Pl. III/1-7.

⁹ DUMITRESCU 1936, 231.

¹⁰ MOZSOLICS 1973, 200; LUCA *et alii* 2003, 38; POPESCU 2013, 225.

¹¹ MOZSOLICS 1973, 200; POPESCU 2013, 225.

¹² PÂRVAN 1926, 308; POPESCU 1962, 410; MOZSOLICS 1973, 200; PETRESCU-DÎMBOVIŢA 1977, 127; LUCA *et alii* 2003, 38; POPESCU 2013, 225.

¹³ PÂRVAN 1926, 404, fig. 257/22.

¹⁴ PÂRVAN 1926, 404, fig. 257/22.

¹⁵ DUMITRESCU 1936, 232.

¹⁶ Name given by the authors of the study to differentiate between the hoard discussed in these pages and the one discovered in March, also in the Braşov area.

¹⁷ ȚÂRLEA *et alii* 2015.

National History Museum of Romania, there were nine individual rings, six rings attached two by two and six rings attached three in a row. The weights of the rings differ, the lightest is only 2.01 g, and the heaviest is 9.73 g. Typologically, the pieces cover all three variants proposed by M. Rusu.

5. Orchidan Collection. Eleven gold notched rings of unknown provenance are present. In the specialized literature they are presented as part of a Hallstatt necklace consisting of ten earrings and a ring, decorated with notches, having various horizontal and oblique motifs. The diameter is given as 22.5 mm and their total weight is 43.02 g¹⁸.

6. Tăuteu (Bihor County; Pl. 6/6). In the Bereteu valley, near Marghita, and the forest, a 10-year-old boy found in September 1934 objects from the Bronze Age, which entered the collections of the "National House" museum. The oldest publication of the hoard, presents it as consisting of: six bronze rings; one ax with bronze; two bronze buttons; five bronze knives; one half ax; five gold rings; a small clay pot; five copper ingot fragments; fragments of clay vessels dating from the Bronze Age¹⁹.

The five full gold notched rings are open with the ends slightly overlapping, thin and pointed. All are decorated with parallel incisions, longitudinal and transverse, the incisions being arranged in groups on the entire surface of the objects, only the extremities remaining undecorated. Their weight and maximum diameter are 38: 10.20 g with 55 mm; 7.20g with 34mm; 5.90g by 33.2mm; 3.05g by 24.3mm; 2.40g by 21.2mm; 1.20 g with the length of the two fragments together of 10 mm²⁰. Together with two fragments that are part of some of the rings, the total weight of the resulting piece would have been 11.40 g²¹.

Chronology. Based mainly on their association with the bronze objects in the hoards, the incised gold rings of the Brăduț type are considered to belong to the Early Iron Age, specifically Hallstatt B1 (10th century BC), and fall into hoarding horizon Moigrad – Tăuteu²².

The four rings will be analyzed taking into account their size, shape, technology, decoration techniques and metal composition.

Form. All four rings have a circular-ovoid shape.

Decor. Based on the décor, an attempt was made to determine how many variations could be obtained if the number of decor segments was taken into account. These variants are established only for the Brașov II hoard, without any certainty that they will prove to be generally applicable and more as a tentative approach for possible future research on this subject²³.

Based on the number of decoration segments the rings from the Brașov II hoard were separated into three main variants: A – the metal bar is divided into 5 segments (2 undecorated ends; 2 segments with notches parallels; 1 central segment with more sophisticated decoration); B – the metal bar is divided into 9 segments (2 undecorated ends; 2 segments with parallel notches; 2 segments with more sophisticated decoration; 2 segments

¹⁸ GRAMATOPOL, THEODORESCU 1966, 66, pl. V/1.

¹⁹ DUMITRESCU 1936, 225.

²⁰ OANȚĂ-MARGHITU 2013, 224, cat. 35,1-35,5.

²¹ DUMITRESCU 1936, 225; DÂMBOVIȚA 1961, 81; OANȚĂ-MARGHITU 2013, 224, cat. 35,1-35,5.

²² PÂRVAN 1926, 308, dates the treasure from Brăduț to Bronze IV (1000-900 BC); PETRESCU-DÎMBOVIȚA 1961, 106; PETRESCU-DÎMBOVIȚA 1977, 136-137; RUSU 1972, 36.

²³ ȚÂRLEA *et alii* 2015, 58. Taking into account the geographical proximity of the two hoards, but also the typological proximity of the pieces, I have taken as reference the decoration variants used in this study.

with parallel notches; 1 central segment with more sophisticated decoration); C – the metal bar is divided into 3 segments (2 undecorated ends; 1 longer segment with parallel notches)²⁴.

Functionality. Although there have been numerous discussions on how to use this type of artifact, researchers have not reached an unanimously accepted conclusion. V. Pârvan considers them "money-rings"²⁵ or "perhaps coins"²⁶. D. Popescu states that, in general, notched rings can be considered "money-rings", but also as ornaments, as loop rings²⁷.

The arrangement in which rings of this type are often found, in the form of chains, might suggest that they were worn on at least some occasions or by some people as such, perhaps hanging from the neck or waist, or attached to clothing or helmets²⁸.

Spectral analyses²⁹. Energy-dispersive X-ray fluorescence (ED-XRF) analyzes were performed using a Bruker Tracer S1 Titan portable spectrometer. The spectrometer uses a rhodium (Rh) anode tube to generate an X-ray beam with maximum energy of 50 keV. For the present study, the beam energy was limited to 40 keV.

To probe each sample, the beam passed through an 8 mm collimator to reach each sample. A silicon drift detector (SDD) positioned back at an angle of approximately 45° to the Rh anode tube was used to record the spectra.

As a result of the analysis, the majority percentage is gold (between 87.542% and 89.189%), followed by silver (between 9.641% and 10.651%), and copper (between 1.173% and 1.619%). In only one case, in the piece with inventory number II 8350-1, a small amount (0.255 %) of iron appears.

Weight. Due to the fragility of the four rings, I considered it inappropriate to separate them, the risk of them being damaged being unavoidable. The four rings together weigh 7.19 g³⁰.

Technology. Rings with turned or rolled flat-hammered ends (*Ösenringe*). In their case, the metal was cast into a groove and resulted in thin, elongated bars³¹. The investigation results indicated sand casting, but stone molds could not be completely ruled out. The cross-section of the rough cast bar was then reworked to make it rounder, the ends of the bar were flattened and curled more or less into loops, then the bar was bent into a ring shape. Most of the items were found in an annealed state, which would suggest that the final deformation was hot working. The most characteristic aspect of this method is the resulting concave appearance of the inner part of the ring, indicating the cooling shrinkage that affected the surface of the original metal bar. This feature is a direct result of using open molds³².

Catalogue.

1. Braduţ type ring (II 8350-1), variant C (Pl. 1/1; 2/1)

Dimensions: maximum diameter 0.18 cm; minimum diameter 0.16 cm; thickness between 0.6 and 0.23 cm.

Section: circular transverse, with pointed ends, undecorated, slightly overlapping.

²⁴ ȚÂRLEA *et alii* 2015, 58-61.

²⁵ PÂRVAN 1926, 308.

²⁶ PÂRVAN 1926, 404.

²⁷ POPESCU 1956, 227.

²⁸ FLORESCU, FLORESCU 1983, 115.

²⁹ The analyzes were carried out at the National Institute for R&D in Physics and Nuclear Engineering Horia Hulubei, Măgurele, Romania by researchers D. A. Mirea and D.C. Olteanu, I thank them in this way.

³⁰ Weighing was done with a ROSLIM high-precision jeweler's scale.

³¹ ȚÂRLEA *et alii* 2015, 67.

³² ȚÂRLEA *et alii* 2015, 67.

Decoration: the piece is divided into five segments: undecorated heads; two segments decorated with 20 parallel circular incisions, respectively 32 parallel circular incisions on the opposite side; a central segment decorated with eight parallel oblique incisions.

Spectrographic analysis: the piece contains: Fe- 0.255% (+/- 0.018%); Cu- 1.552% (+/- 0.039%); Ag- 10.651% (+/- 0.170%); Au- 87.542% (+/-0.454%).

State of conservation: very good.

Bibliography: MOZSOLICS 1973, 200; POPESCU 2013, 225.

2. Braduț type ring (II 8350-1, version C (Pl. 1/2; 2/2)

Dimensions: maximum diameter 0.22 cm; minimum diameter 0.20 cm; thickness between 0.6 and 0.24 cm.

Section: circular transverse, with pointed ends, undecorated, slightly overlapping.

Decoration: the piece is divided into five segments: an undecorated end; two segments decorated with 34 parallel circular incisions, respectively 43 parallel circular incisions on the opposite side that go to the pointed end of the ring; a central segment decorated with eight parallel oblique incisions.

Spectrographic analysis: the piece contains: Cu- 1.379% (+/- 0.043%); Ag- 9.641% (+/- 0.170%); Au- 88.981 % (+/- 0.387%).

State of conservation: very good.

Bibliography: PÂRVAN 1926, 404; DUMITRESCU 1936, 232.

3. Brăduț type ring, variant A (Pl. 1/3; 2/3)

Dimensions: maximum diameter 0.21 cm; minimum diameter 0.18 cm; thickness between 0.6 and 0.23 cm.

Section: circular transverse, with pointed ends, undecorated, slightly overlapping.

Decoration: the piece is divided into five segments: undecorated ends; two segments decorated with 28 parallel circular incisions, respectively 30 parallel circular incisions on the opposite side that go to the pointed end of the ring; a central segment decorated with two parallel oblique incisions and nine parallel oblique incisions arranged opposite to the first.

Spectrographic analysis: the piece contains: Cu- 1.619% (+/-0.043%); Ag- 10.657% (+/-0.184%); Au- 87.742% (+/- 0.416%).

State of conservation: very good.

Bibliography: PÂRVAN 1926, 404; DUMITRESCU 1936, 232.

4. Brăduț type ring, variant C (Pl. 1/4; 2/4)

Dimensions: maximum diameter 0.26 cm; minimum diameter 0.16 cm; thickness between 0.5 and 0.21 cm.

Section: circular transverse, with pointed ends, undecorated, slightly overlapping.

Decoration: the piece is divided into five segments: an undecorated end; two segments decorated with 31 parallel circular incisions, respectively 28 parallel circular incisions on the opposite side that go to the pointed end of the ring; a central segment decorated with eight parallel oblique incisions.

Spectrographic analysis: the piece contains: Cu- 1.173% (+/- 0.035%); Ag- 9.571% (+/- 0.167%); Au- 89.189 % (+/-0.401 %).

State of conservation: very good.

Bibliography: ȚÂRLEA *et alii* 2015.

The publication of this small hoard consisting of four gold rings decorated with notches brings a new contribution to the history of the analysis of these types of pieces, which are

quite rare in the intra-Carpathian space. Together with the other five discoveries of this type, the Braşov I hoard completes the picture of the spread of these types of spectacular artifacts.

References

- DUMITRESCU, V. 1936. Le depot del fin de l'âge du bronze découvert à Tăuteni. *Dacia* 5-6, 225-234.
- FLORESCU, M., FLORESCU, A. 1983, Cercetările arheologice de la Cîndeşti – Coasta Banului, com. Dumbrăveni, jud. Vrancea. *Materiale şi Cercetări Arheologice* 15, 112-123.
- GRAMATOPOL, M., THEODORESCU, R. 1966. Vechi podoabe de aur în colecţiile Cabinetului Numismatic al Academiei Republicii Socialiste România. *Studii şi Cercetări de Istoria Artei*, Seria Arta Plastică 13/1, 63-95.
- LUCA, S.A., PINTER, Z.K., GEORGESCU, A. 2003. *Repertoriul arheologic al judeţului Sibiu. Situri, monumente arheologice şi istorice*, Bibliotheca Septemcastrensis 3, Ed. Economică, Sibiu.
- MOZSOLICS, A. 1973, *Bronze- und Goldfunde des Karpatenbeckens. Depotfund horizonte von Forró und Ópályi*, Budapest.
- OANȚĂ-MARGHITU, R. 2013, Depozitul de la Tăuteu, jud. Bihor. In: R. Oanță Marghita (ed.), *Aurul şi argintul antic al României, Catalog de Expoziție*, Muzeul Național de Istorie a României, București, 224.
- PÂRVAN, V. 1926. *Getica*, București.
- PETRESCU-DÎMBOVIȚA, M. 1961. Date noi cu privire la depozitul de bronzuri de la Tăuteu (r. Marghita, reg. Crişana). *Arheologia Moldovei* 1, 81-114.
- PETRESCU-DÎMBOVIȚA, M. 1977. *Depozitele de bronzuri din România*, București.
- POPESCU, D. 1956. Prelucrarea aurului în Transilvania înainte de cucerirea romană. *Materiale şi Cercetări Arheologice* 2, 196-250.
- POPESCU, D. 1962. Asupra unor tezaure de aur din epoca bronzului. *Studii şi Cercetări de Istorie Veche* 13/1, 399-412
- POPESCU, A. 2013. Lanţ compus din verigi de tip Brăduţ, Apoldu de Sus, Miercurea Sibiului, jud. Sibiu, Cat. No. 36. In: R. Oanță-Marghita (ed.), *Aurul şi argintul antic al României, Catalog de Expoziție*, Muzeul Național de Istorie a României, București, 225.
- RUSU, M. 1972. Considerații asupra metalurgiei aurului din Transilvania în Bronz D şi Hallstatt A. *Acta Musei Napocensis*, 9, 29-63.
- ȚÂRLEA, A., TĂTARU, C., FLOREA, M., GEORGESCU, M., BALTĂ, Z. 2015. The Early Iron Age Gold Treasure from Braşov. *Peuce* SN XIII, 45-90.

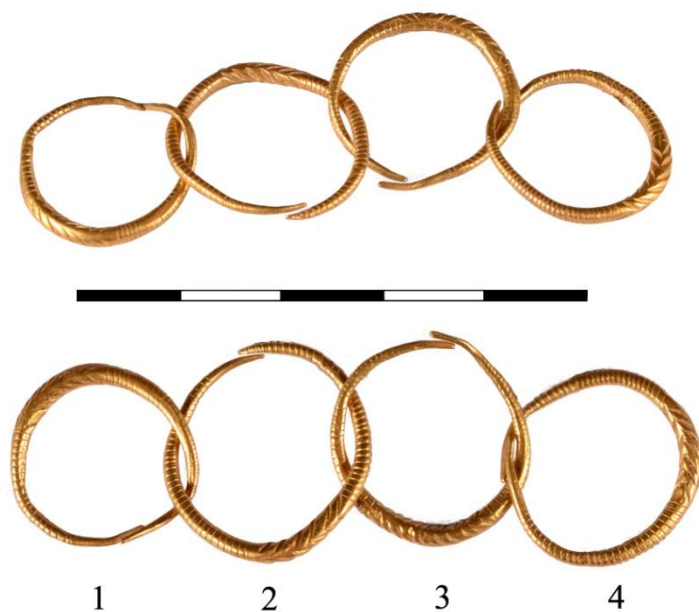


Plate 1. Gold rings from the Braşov I hoard (photo Dan Gridean; processing images Mihaela Cioc)

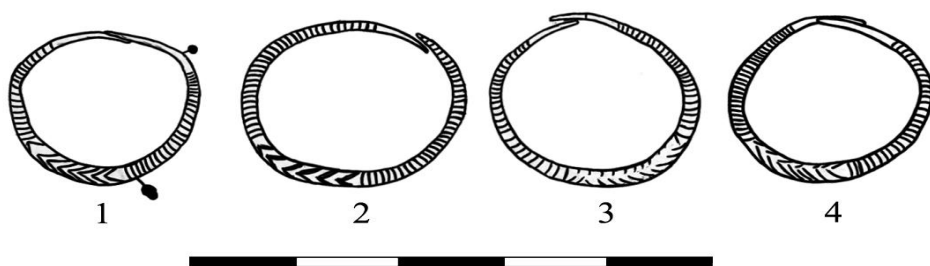


Plate 2. Gold rings from the Braşov I hoard (drawing: Mihaela Cioc).

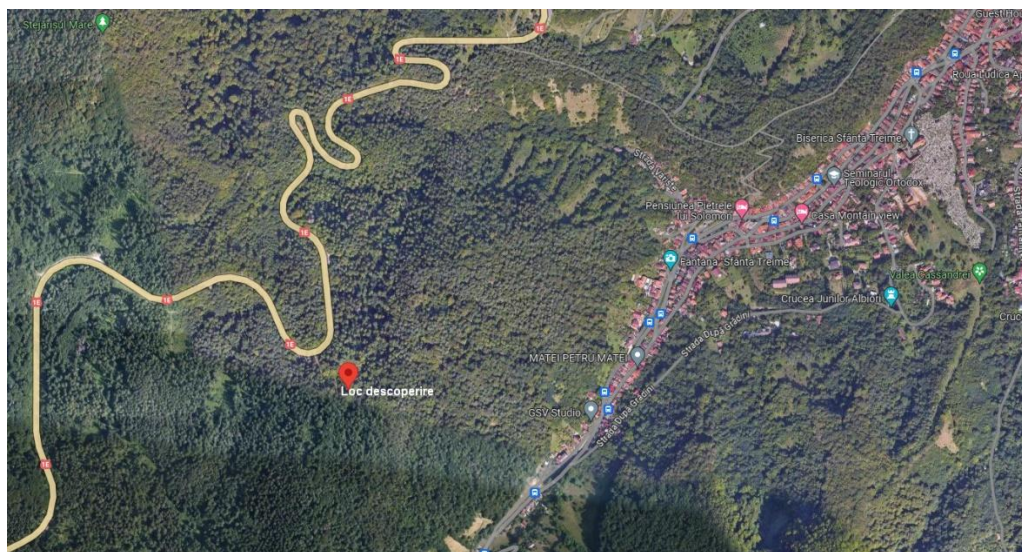


Plate 3. Treasure discovery location Braşov I.

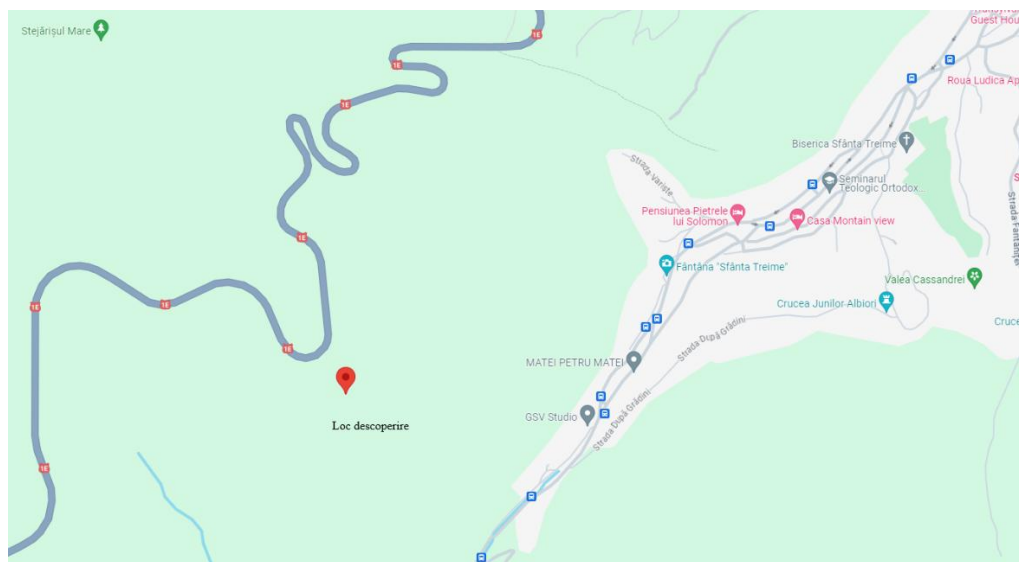


Plate 4. Treasure discovery location Braşov I.

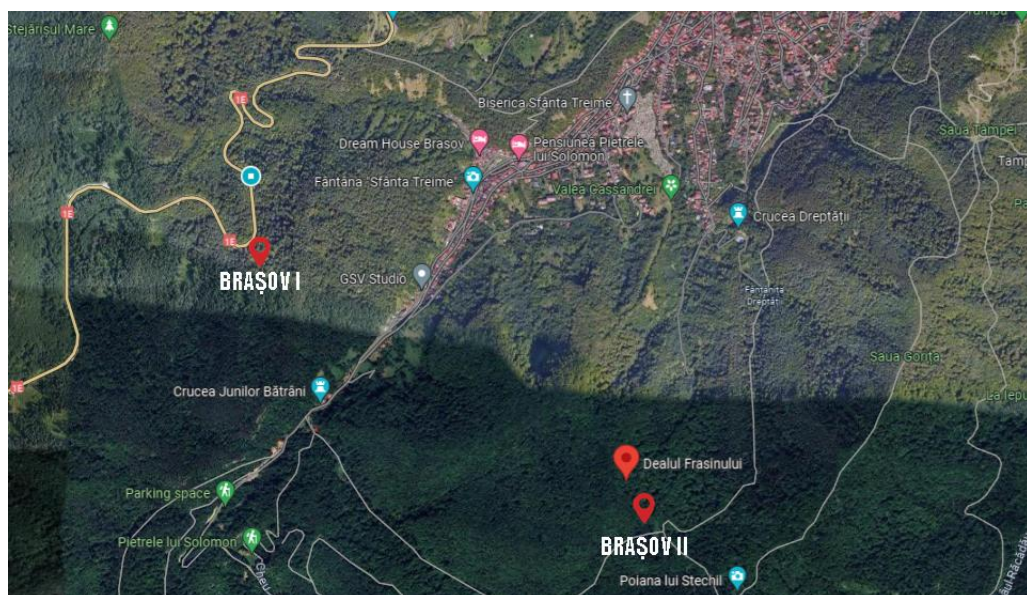


Plate 5. Map of Brașov I and Brașov II treasure locations.

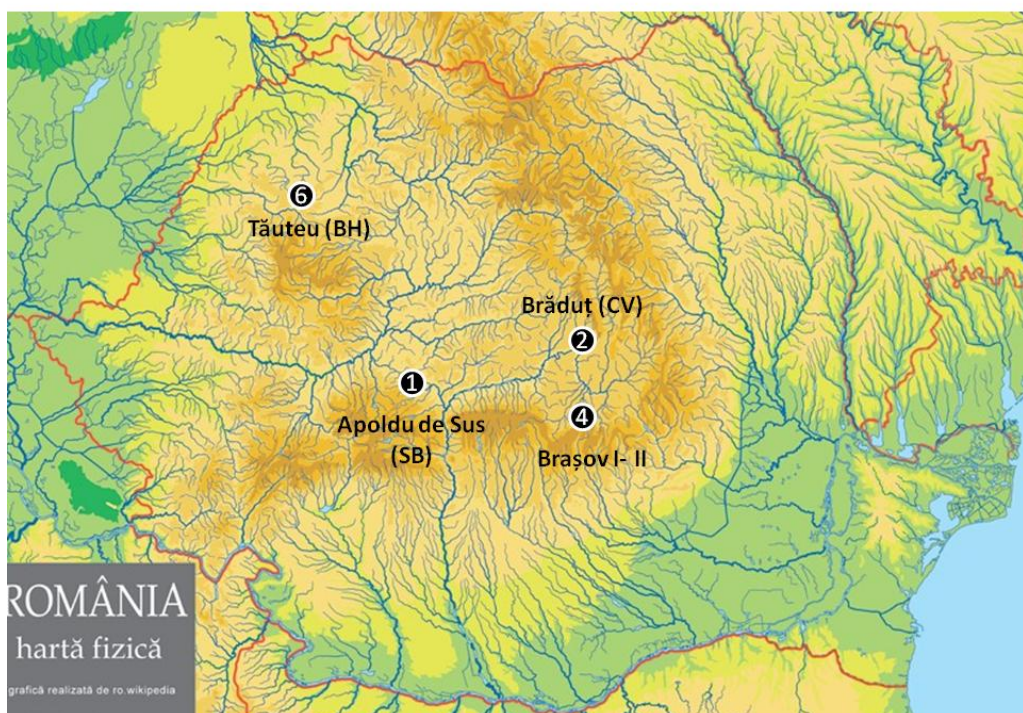


Plate 6. Map of Romania with the distribution of Brăduț type rings.



© 2024 by the authors; licensee Editura Universității Al. I. Cuza din Iași. This article is an open access article distributed under the terms and conditions of the Creative Commons by Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).