

A COPPER AXE FOUND IN THE CUCUTENI SETTLEMENT OF FULGERIȘ (BACĂU COUNTY)

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Key words: Chalcolithic, Cucuteni culture, Fulgeriș settlement, copper axe, Ariușd type.

The present study examines an artifact found during the archaeological research campaign carried out in 2007 on the Cucuteni settlement, in Fulgeriș village, Pâncești commune, Bacău county. We must state, right from the beginning, that no other artifacts made of copper have been discovered in the Cucuteni settlement of Fulgeriș during the previous campaigns, carried out in the 80's and after 2003.

The archaeological exploration took place north from Fulgeriș village (commune of Pâncești, Bacău county), on the Fulgeriș hill. The place is called *La 3 cireși* by the local community and it is situated in the south-eastern part of the county, geographically placed amongst Tutova's Hillocks. On this particular archaeological site have also been discovered artifacts dating from Chalcolithic Age (Cucuteni culture), Bronze Age (Costișa culture), and the "Classic" Geto-Dacian Period.

The exploration of this site has started back in 1987-1988, when the archaeologist Viorel Căpitanu¹ took the initiative to examine the area. As a result of the examination of the area mentioned above, it was found that, of all periods, the habitation in Chalcolithic was most dense. The investigation was resumed in 2003 at the main aim of drawing up the boundaries of the site, following the superficial examination in the 80's. Another objective was to determine the actual stratigraphy, as the initial stratification outlined in 2003 revealed a different formation compared to the previous explorations, difference caused by natural degradation of the site (landfalls, precipitations etc.), or anthropic causes (annual ploughing), and the fact that the Cucuteni level is at low depth. Between the years 2003 and 2007² nine sections have been dug, as it follows: S I (dimensions: 20 x 2 m), in 2003; S II (dimensions: 20 x 2 m) and S III (dimensions: 20 x 2 m), in 2004; S IV (dimensions: 25 x 2 m), S V (dimensions: 20 x 2 m) and S VI (dimensions: 10 x 2 m), in 2005; resuming researches in S VI and delimiting S VII (dimensions: 20 x 2 m), in 2006; S VIII (dimensions: 10 x 2 m) and S IX (dimensions: 20 x 2 m), in 2007. On the whole, during these five campaigns, 330 m² of the Cucuteni site have been studied, the entire site being estimated at about one hectare.

During the 2007 campaign another section, S IX, has been delimited perpendicular to the previous sections (2003-2006) and probably alongside those delimited during the research campaigns organized in the 80s. We must specify that in section S IX, at -0.35 -0.40 m deep, a large quantity of ceramics has been discovered, broken *in situ*, together with other bone fragments of animal origin, and other fragments of burnt clay from the housings' walls, and also, here and there,

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¹ V. Căpitanu, *Cercetări arheologice de suprafață pe teritoriul județului Bacău (II)*, Carpica, XIV, 1982, p. 148; *idem*, *Raport de săpătură Fulgeriș (jud. Bacău)*, in *Situri arheologice cercetate în perioada 1983-1992*, Brăila, 1996, p. 50, no. 108.

² Al. Artimon & colab., *Fulgeriș, com. Pâncești, jud. Bacău, Punct Dealul Fulgeriș/La 3 cireși*, in *Cronica cercetărilor arheologice din România. Campania 2003*, Cluj-Napoca, 2004, p. 124-125, no. 74; L. E. Istina & colab., *Fulgeriș, com. Pâncești, jud. Bacău, Punct Dealul Fulgeriș/La 3 cireși*, in *Cronica cercetărilor arheologice din România. Campania 2004*, Mangalia, 2005, p. 152-153, no. 100, pl. 15; *idem*, *Fulgeriș, com. Pâncești, jud. Bacău, Punct Dealul Fulgeriș/La 3 cireși*, in *Cronica cercetărilor arheologice din România. Campania 2005*, Constanța, 2006, p. 162-166, no. 79, pl. 29; *idem*, *Fulgeriș, com. Pâncești, jud. Bacău, Punct Dealul Fulgeriș/La 3 cireși*, in *Cronica cercetărilor arheologice din România. Campania 2006*, Tulcea, 2007, p. 158-160, no. 82, pl. 36.

some fragments of hearth mosaic clay, spread upon a few square meters. After this level was dismantled, at 0.40 - 0.45m deep the ceramic layer had the same consistency as the previous one. The large amount of archaeological material indicates an eventual Cucuteni dwelling of considerable dimensions, but only further investigations will provide the appropriate answers, concerning the type of the construction, whether there is a construction at all. The next campaign will be set for a holistic study upon the entire surface.

This particular section contains, among other discoveries, a copper axe, with “crossed arms”, the Ariușd type, which makes the object of this study.

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The artifact was found in the section S IX, □ 4b, -0,42 m. This section shows traces of a surface Cucuteni dwelling, without floor. The dwelling is indicated by the considerable amount of ceramics, broken *in situ*, at 0.35 -0.40 m deep, most of it in the squares □ 1-6, the same area where the axe was found.

The axe/pickaxe is made of copper, has “crossed arms”, classified as Ariușd type. Its surface shows green hues. It was made by moulding. It shows an old perforation caused by a mechanical pressure. It has a pentagonal shape, with a semicircular edge.

Dimensions: L = 20 cm, 1 edge = 4.1 cm, 1 top = 3.9 cm, oval perforation = 3.5 x 2.8 cm, weight = 834 g.

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This artifact belongs to the Ariușd type axes, according to its morpho-technical classification. It shows similarities with other artifacts discovered in: Ariușd (Brașov county)³, Leț (Boroșneul-Mare commune, Covasna county)⁴, Bod (Brașov county)⁵, Florești (Vaslui county)⁶, Slobozia (Stănișești commune, Bacău county)⁷, Berevoiești (Argeș county)⁸, Sălard (Bihor county)⁹, Sebeș (Alba county)¹⁰, Brașov¹¹, Bodoc (Covasna county)¹², Sântionlunca (Ozun commune, Covasna county)¹³.

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The artifact was studied within the ARCHAEMET programme by Mr. Bogdan Constantinescu¹⁴, main scientific explorer at The Institute of Nuclear Physics and Engineering Măgurele. This programme runs scientific researches upon old metallurgical technologies, with the contribution of the most renowned institutions in the field of Archaeology and Nuclear Physics: The National History Museum of Romania, The University of History Bucharest, The Institute of Archaeology of Romanian Academy and The Institute of Nuclear Physics and Engineering Bucharest.

³ A. Vulpe, *Die Äxte und Beile in Rumänien*, II, PBF, IX, 5, München, 1975, p. 35, no. 84, pl. 11; I. Mareș, *Metalurgia aramei în neo-eneoliticul României*, Suceava, 2002, p. 109, no. 51.

⁴ A. Vulpe 1975, p. 35, no. 85, pl. 11; I. Mareș 2002, p. 109, 257-258, pl. 25/ 4, no. 1222.

⁵ A. Vulpe 1975, p. 35-36, no. 86, pl. 11; I. Mareș 2002, p. 109, 195, pl. 25/3, no. 122.

⁶ A. Vulpe 1975, p. 36, no. 87, pl. 11; I. Mareș 2002, p. 109, 236-238, pl. 25/ 5, no. 998.

⁷ A. Vulpe 1975 p. 36, no. 87A, pl. 11; I. Mareș 2002, p. 109, 300, pl. 25/ 12, no. 1473.

⁸ A. Vulpe 1975, p. 36, no. 88, pl. 11; I. Mareș 2002, p. 109, 191, pl. 25/ 2. no. 103.

⁹ A. Vulpe 1975, p. 36, no. 89, pl. 12; I. Mareș 2002, p. 109, 290, pl. 25/ 9, no. 1415.

¹⁰ A. Vulpe 1975, p. 36, no. 90, pl. 12; I. Mareș 2002, p. 109, 297, pl. 25/ 10, no. 1456.

¹¹ A. Vulpe 1975, p. 36, no. 91, pl. 12; I. Mareș 2002, p. 109, 199, pl. 25/ 7, no. 448.

¹² A. Vulpe 1975, p. 36, no. 92, pl. 12; I. Mareș 2002, p. 109, 196, pl. 25/ 8, no. 145.

¹³ A. Vulpe 1975, p. 36, no. 93, pl. 12; I. Mareș 2002, p. 109, 296, pl. 25/11, no. 1444.

¹⁴ We'd like to thank Mr. Constantinescu for collaboration.

According to the measurements (a tubular X-ray fluorescent spectrometer was used) the material, coming from Transylvania, has the following composition:

Cu	Ag	Sb	Pb
99.5%	0.15%	0.10%	traces

The presence of silver and stibium indicates the Transylvanian origins of the copper ore. During the Cucuteni period there were multiple interchanges on both sides of the Eastern Carpathian Mountains (Ariuşd area is located in Transylvania, while the main Cucuteni culture spreads upon Moldova). Analysing black ceramic pigments, Mr. Bogdan Constantinescu discovered that manganese minerals from Iacobeni (by Vatra Dornei, Suceava county) were used in Bistriţa Valley sites (Calu, Izvoare, Căşăria), in central and north-eastern Moldova sites, as Poduri, Ruginoasa, and also in Ariuşd area (Sf. Gheorghe). A future evaluation of the copper composition in this axe and other similar axes will be valuable in establishing of the distribution of copper as the means of trade with other merchandises in Cucuteni culture.

Translated by Cristina Panican.

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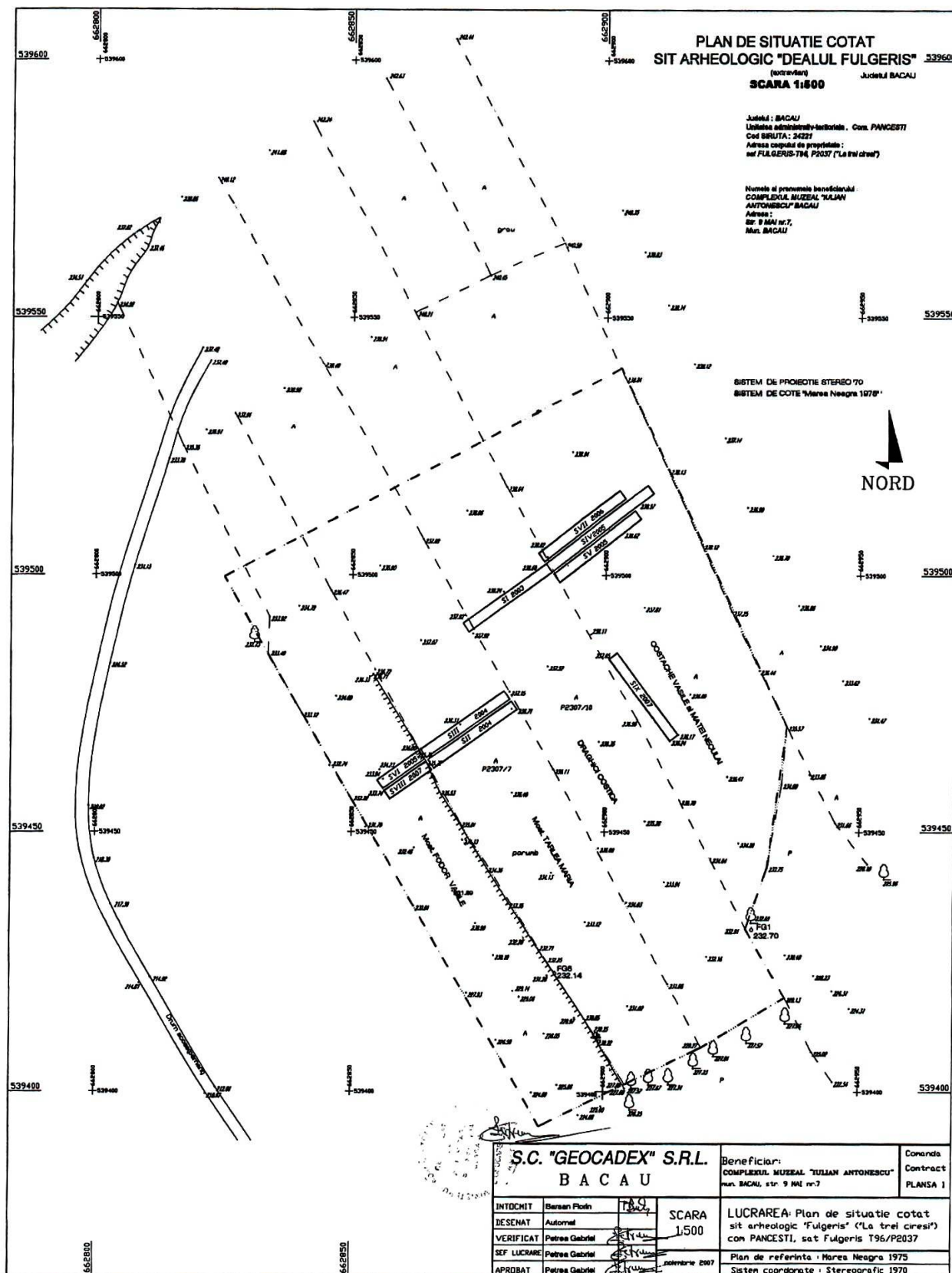


Fig. 2 – Ridicarea topografică a sitului, cu amplasarea secțiunilor I-IX/ 2003-2007

Zona de descoperire a
toporului-târâncop de cupru.
The finding area of the copper
(pick)axe.

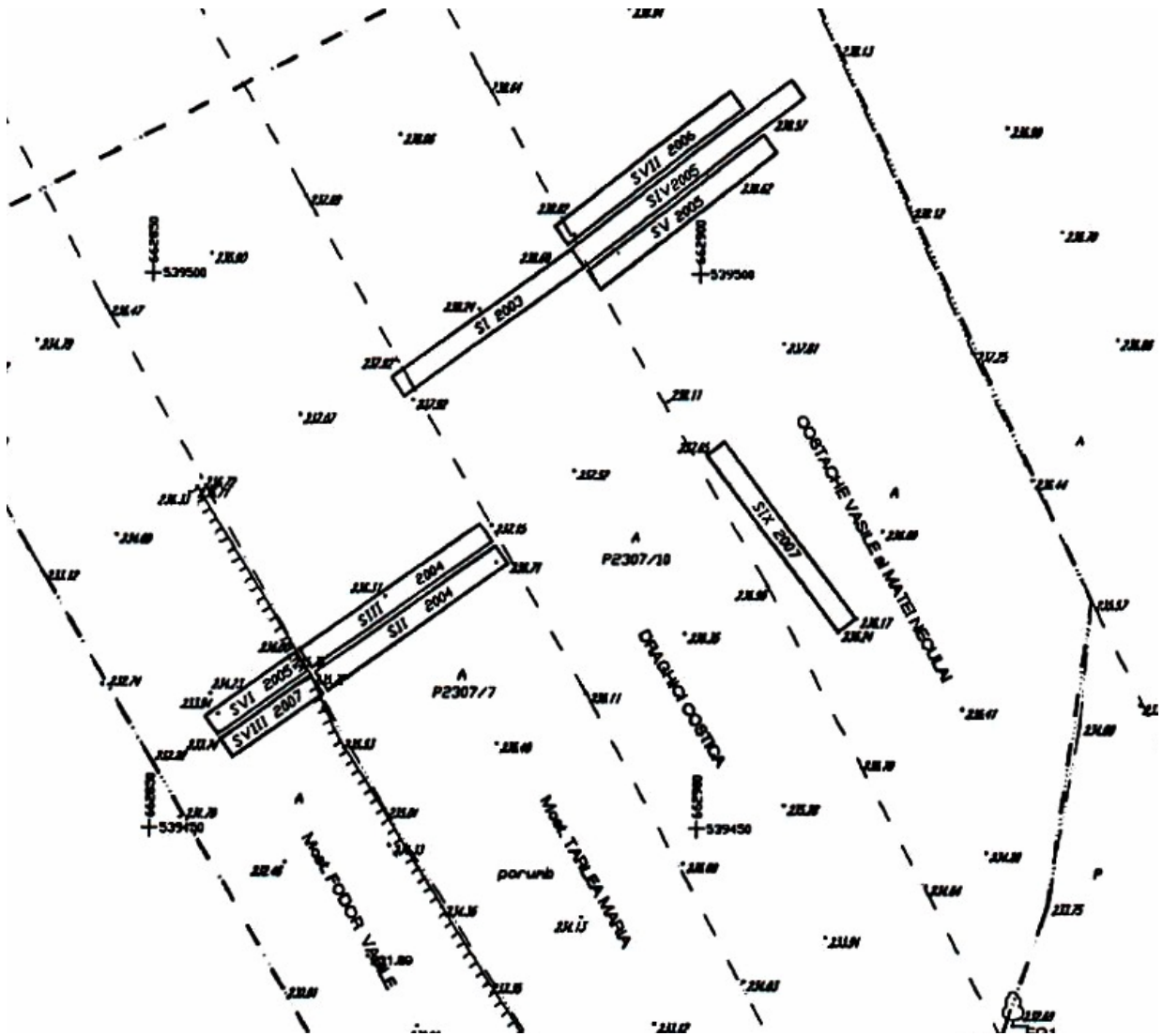


Fig. 3 – Locul de descoperire a toporului în cadrul sitului.

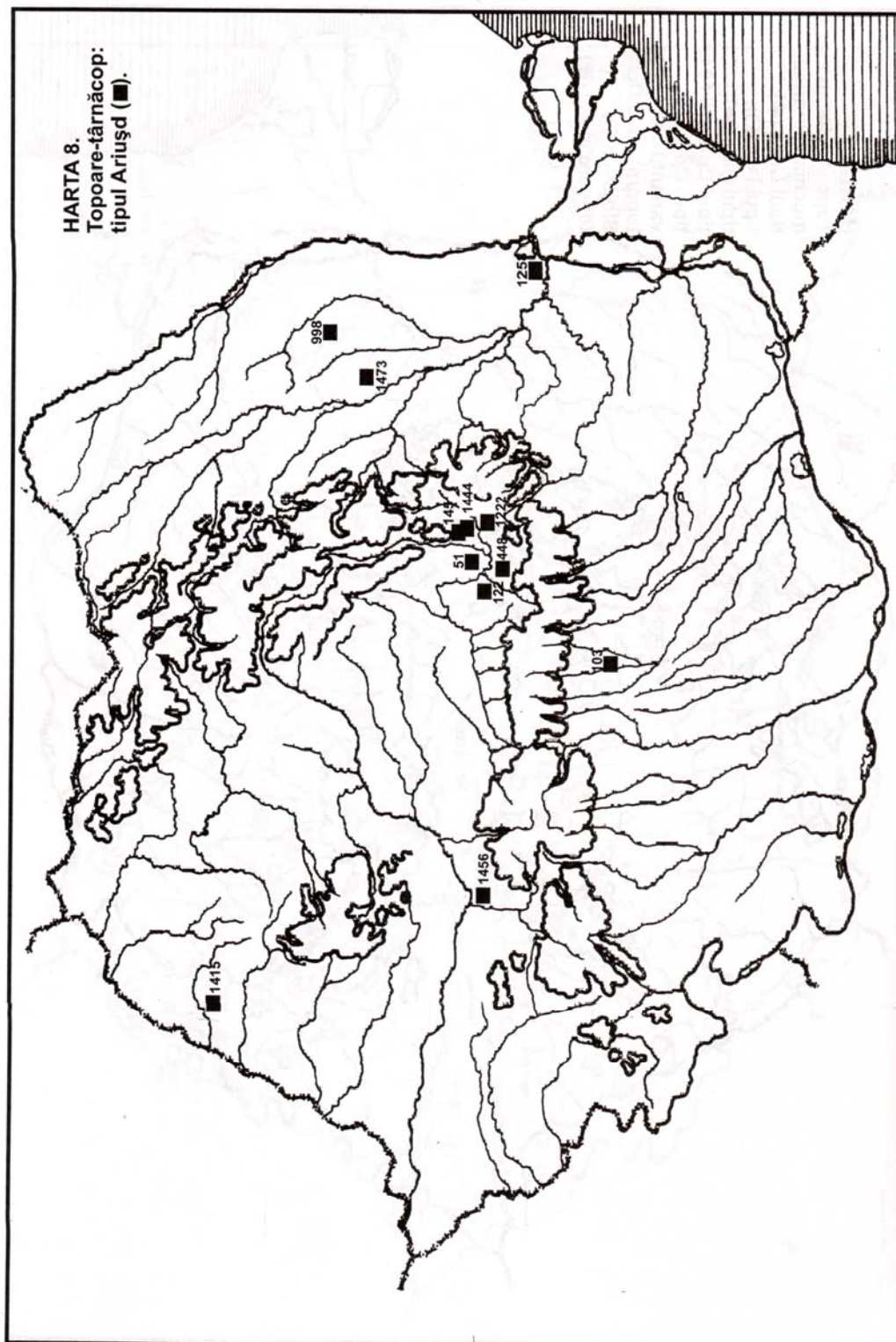


Fig. 4 – Răspândirea topoarelor de tip Ariușd (după I. Mareș 2002, Harta 8)

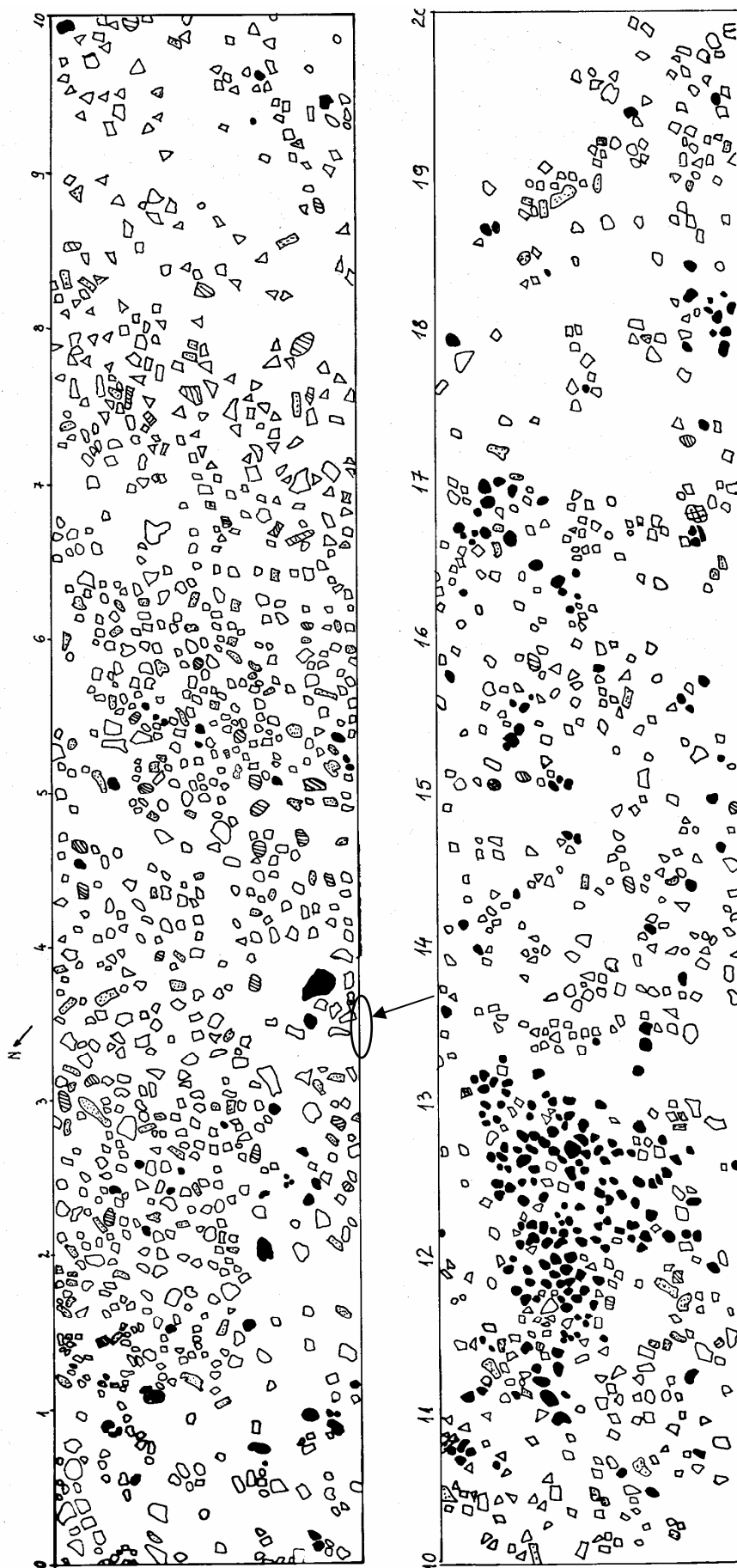


Fig. 5 – Secțiunea S IX, -0,35-0,40 m (locul de descoperire a toporului)



Fig. 6 – Toporul *in situ*

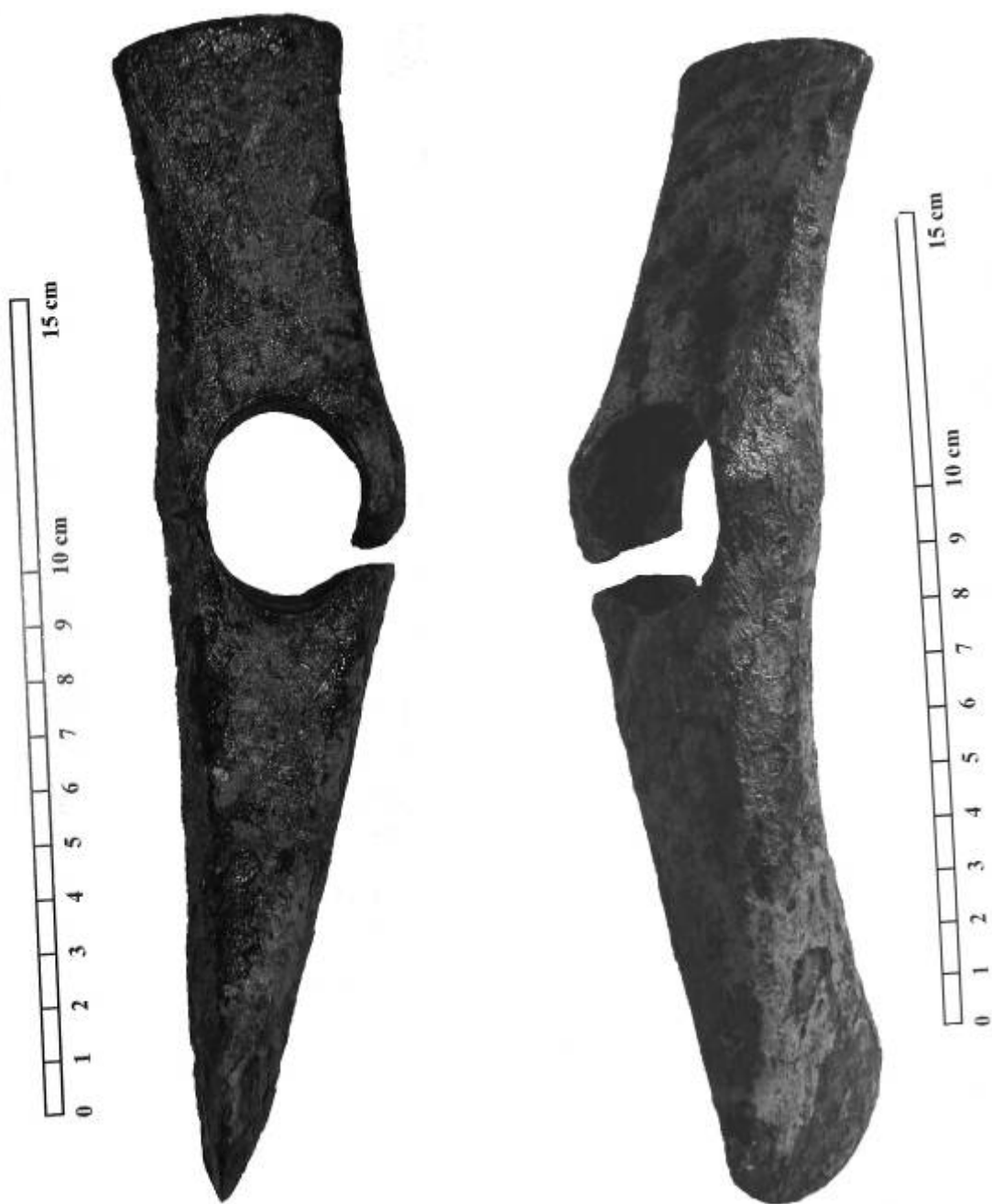


Fig. 7 – Toporul de la Fulgeriș.

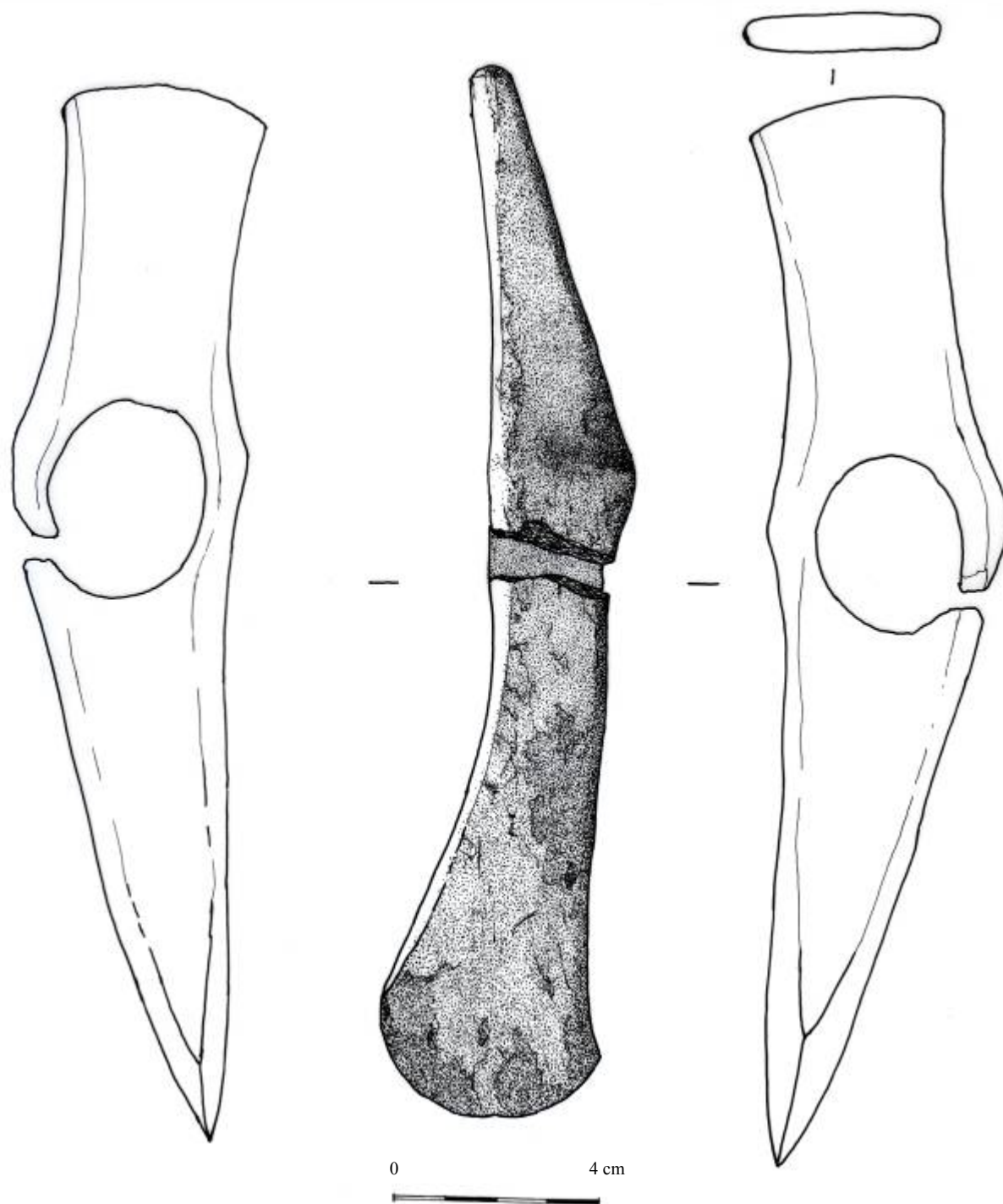


Fig. 8 – Toporul de la Fulgeriș, com. Pâncești, jud. Bacău¹

¹ Desen realizat de colega noastră Andra Iuliana Ciocârlan, căreia îi mulțumim și pe această cale (We'd like to thank our colleague, Andra Iuliana Ciocârlan, the author of the drawing).