

# WATER MANAGEMENT IN BRONZE AGE FROM SUBCARPATHIAN CURVATURE (MONTEORU CULTURE)

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**Key-words:** Bronze Age, Monteoru culture, clay-finished pits.

**Abstract:** In this material we present a number of five pits, from Bronze Age, Monteoru culture, which we consider that at the time were used as water reservoirs. All the pits were discovered at Cârломănești-Cețățuia, Vernești commune, Buzău County, starting with 2005. We remark the similarities between these five complexes such as a clay layer set on the walls and bottom, cylindrical or conical shape, as well as the special treatment applied to the bottom of the pits. As far as the clay layer is concerned, all cases involve fine, compact, unburnt clay varying between 0.5 and 3 cm of thickness, partially found on walls and fallen on the bottom of the pit where it constitutes a significant sediment, without visible human intervention. This is most likely evidence to the fact that the pits became waste disposal areas when they partially deteriorated.

**Cuvinte-cheie:** epoca bronzului, cultura Monteoru, gropi lutuite.

**Rezumat:** În materialul de față prezentăm un număr de cinci gropi aparținând epocii bronzului, cultura Monteoru, despre care considerăm că au servit ca bazine pentru captat și păstrat apa, cercetate la Cârломănești-Cețățuia, com. Vernești, jud. Buzău, începând cu campania arheologică din anul 2005. În ceea ce privește aceste complexe, remarcăm câteva similitudini precum lutuirea pereților și bazei, forma cilindrică sau conică, precum și amenajarea de la bază. În ceea ce privește lutuiala, în toate cazurile este vorba de lut fin, compact, nears, cu grosimi variabile între 0,5-3 cm, surprins parțial pe pereți și căzut pe fundul gropilor, în depunere consistentă și fără imixtiuni de natură antropică. Aceasta constituie, probabil, dovada faptului că respectivele gropi au devenit spații de degajare a deșeurilor în momentul în care s-au degradat parțial.

*Access* to water in prehistoric communities, as well as the importance of water management has been a widely debated issue in the literature<sup>1</sup>. Based on the geographical area in question, specialists have identified various levels of implementation of the water management systems, as well as the development of related techniques. In the Middle East, it is believed that the need to organize a complex water management system, and create irrigation systems stood for a factor that led to the birth of city-states<sup>2</sup>. If, in this case, building techniques and solutions for water use were developed, it is still in the Middle East that flood prevention systems were identified. Mention must be made, first, of the discovery in Tell Jawa, in northern Jordan, of what is believed

to be the oldest dam that has been documented so far, which is thought to have survived from the Bronze Age<sup>3</sup>. This structure is made of a double stone wall and soil and ash filling material, 80 meters long and 5 meters high, with a 42,000-cubic-meter capacity. Constructions with a similar role are documented in Petra<sup>4</sup> as well. We have no intention to dwell on the water intake and flood prevention systems in the Middle East associated to the Bronze Age, however, mention must be made of the rain water intake systems in Hara and Khirbet Dabab<sup>5</sup>. Other water intake systems were also documented on the American continent, the wells of Blackwater Draw (New Mexico), 14 such installations researched, some other 6 in Mustang

<sup>1</sup> Grahame 1944; Mithen 2010.

<sup>2</sup> Steward 1955; Wittfogel 1957; Adams 1966; Adams 1978.

<sup>3</sup> Fahlbusch 2007.

<sup>4</sup> Rawlings, Woodburn 1996; Philip 2008.

<sup>5</sup> Braemer *et alii* 2009.