

## A NEW BRONZE AGE AXE DISCOVERED IN NORTHERN DOBRUDJA

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**Abstract:** In 2007, Tulcea History and Archaeology Museum purchased a new shaft-hole axe accidentally found at Malcoci, Nufăru, Tulcea County. The axe is considered to belong to the *Pătulele* type which is spread in the southern part of Transylvania, Walachia, Moldavia, Oltenia, Banat, Dobrudja and northern and central Bulgaria. The most southern location of this type of axe is Thebes, which serves as an important chronological landmark for dating these axes.

On the Romanian territory, the *Pătulele* type axes are dated to the beginning of the Romanian Middle Bronze Age (2400-2200 B.C., after Al. Vulpe), corresponding to the crystallization of Monteoru, Wietenberg, Tei and Otomani cultures.

The presence of several axes of this type in Dobrudja can be attributed to the *Jamnaja* and *Katakombnaja* cultures that have been documented by numerous funerary discoveries, especially from Northern Dobrudja. These cultures can also be connected to the presence in Dobrudja of several eastern items like the axes discovered at Mahmudia and the one from Măcin.

**Key words:** copper axe, Bronze Age, isolated find.

**Cuvinte cheie:** topor din cupru, epoca bronzului, descoperire întâmplătoare.

In 2007, Tulcea History and Archaeology Museum purchased a new shaft-hole axe accidentally found at Malcoci, Nufăru, Tulcea County<sup>1</sup>.

The item is slender, the blade has a hexagonal profile and is slightly curved towards the shaft-hole, and the edge is arched and widened. The hafting hole is cylindrical and extended with a tube outside which there is a vein that becomes wider to the inferior end, takes a triangular shape and surpasses the margin of the tube.

The object was cast through the shaft-hole's inferior part in an insufficiently prepared two-piece mould; hence the numerous air bubble shaped defects visible on its surface. The casting seams are well polished, except the superior area of the shaft-hole. Although it is in a relatively good state of conservation, the axe exhibits on its surface numerous notches made both in ancient times and recently.

The dimensions of the axe are: L. = 14.9 cm; blade dimensions = 3.1 × 2.4 cm; blade width = 5.8 cm; shaft-hole diameter = 3.2 cm; weight = 750 g; its surface has a dark green noble patina. The metallographic analyses made by non destructive methods within the Archaeomet project in 2008, indicated the following chemical composition: Cu-99.51%; Fe-0.42%; Pb-0.07 (As-75%); Ag-1861 ppm; As-9331 ppm.

Recently, we have published a similar axe discovered at Niculițel, Tulcea County<sup>2</sup>. Even though the dimensions and weight are different, both axes discovered at Niculițel and Malcoci can be attributed to the *Pătulele* type, as defined by Al. Vulpe. According to the Romanian researcher, its defining characteristics are „the clarity of the curving of the blade compared to the shaft-hole, width of the edge, hexagonal section of the blade and the

<sup>1</sup> The axe is registered under inventory no. 47151; unfortunately, the exact find place is unknown.

<sup>2</sup> Ailincăi 2005.

cylindrical shaft-hole<sup>3</sup>”. Chronologically, Al. Vulpe dates this type of axe to the first part of the Romanian Middle Bronze Age, evolving from Veselinovo II type axes<sup>4</sup>.

At the present, the Pătulele type is documented in Transylvania, in the hoards from Arcuș<sup>5</sup> and Sânzieni<sup>6</sup> and as isolated finds at Avrămești<sup>7</sup>, Bunești<sup>8</sup>, „Sibiu”<sup>9</sup>, Șoimușu<sup>10</sup> and Zlatna<sup>11</sup>. In Banat, the only axe of this type is the one found at Fibiș<sup>12</sup>; in Oltenia and Valachia, artifacts of this type were found at Pătulele<sup>13</sup>, Podari<sup>14</sup>, București<sup>15</sup>, Coslogeni<sup>16</sup> and Mircea Vodă<sup>17</sup>.

Even though Dobrudja lacks in finds dated to the Bronze Age, however it is the source area of an artifact whose exact find place is unknown<sup>18</sup>, and of two axes found at Niculițel<sup>19</sup> and Malcoci. The most northern item was accidentally discovered in Moldavia, at Scărișoara (Bacău County)<sup>20</sup>.

Numerous such axes were found south of the Danube, in Bulgaria and can be partially attributed to axe types 14, 16 and 18 of E. N. Černych’s typology; such findings were made at Belovo<sup>21</sup>, Bjala Slatina<sup>22</sup>, Kazanlyk (?)<sup>23</sup>, Lozen<sup>24</sup>, Prelom<sup>25</sup>, Sava<sup>26</sup>, Reg. Starozagorsk (?)<sup>27</sup>, Ugyrčin<sup>28</sup>, Šumen Region<sup>29</sup>, Varna<sup>30</sup>, Vidim<sup>31</sup>, Kajlyk<sup>32</sup>, Jambol<sup>33</sup>, Nazardžikeskij Region<sup>34</sup>,

<sup>3</sup> Vulpe 1970, 37-38.

<sup>4</sup> Vulpe 1970, 39; Vulpe, Tudor 1970, 421.

<sup>5</sup> Vulpe 1970, 38, Taf. 7/103.

<sup>6</sup> Vulpe 1970, 38, Taf. 7/101-102.

<sup>7</sup> Vulpe 1970, 38, Taf. 7/105.

<sup>8</sup> Vulpe 1970, 38, Taf. 7/98.

<sup>9</sup> Vulpe 1970, 38, Taf. 7/100.

<sup>10</sup> Vulpe 1970, 38, Taf. 7/99.

<sup>11</sup> Vulpe 1970, 38, Taf. 7/97.

<sup>12</sup> Vulpe 1970, 38, Taf. 7/96.

<sup>13</sup> Vulpe 1970, 38, Taf. 7/95.

<sup>14</sup> Vulpe 1970, 38, Taf. 7/104.

<sup>15</sup> Schuster, Munteanu 1995, Fig. 1/e.

<sup>16</sup> Schuster, Munteanu 1995, Fig. 1.

<sup>17</sup> Vulpe 1970, 38, Taf. 7/106.

<sup>18</sup> Vulpe 1970, 38, Taf. 7/107.

<sup>19</sup> Ailincăi 2005.

<sup>20</sup> Buzdugan 1974.

<sup>21</sup> Černych 1978, 141, fig. 23/4.

<sup>22</sup> Černych 1978, 142, fig. 24/4.

<sup>23</sup> Černych 1978, 141, fig. 23/9.

<sup>24</sup> Černych 1978, 141, fig. 23/10.

<sup>25</sup> Černych 1978, 141, fig. 23/7.

<sup>26</sup> Černych 1978, 142, fig. 24/8.

<sup>27</sup> Černych 1978, 142, fig. 24/2.

<sup>28</sup> Černych 1978, 142, fig. 24/3.

<sup>29</sup> Černych 1978, 142, fig. 24/5.

<sup>30</sup> Černych 1978, 141, fig. 23/3.

<sup>31</sup> Černych 1978, 142, fig. 24/7.

<sup>32</sup> Černych 1978, 142, fig. 24/9.

<sup>33</sup> Černych 1978, 143, fig. 25/1.

<sup>34</sup> Černych 1978, 143, fig. 25/2-3.

Raven<sup>35</sup>, Emen Cave<sup>36</sup>, Bjaženica<sup>37</sup>, the axe in the hoard at Vărbica II<sup>38</sup>, and other three items of unknown find place<sup>39</sup>. The only known moulds used to make such axes were also found on Bulgarian territory, in the hoard from Pobit Kamâk<sup>40</sup>.

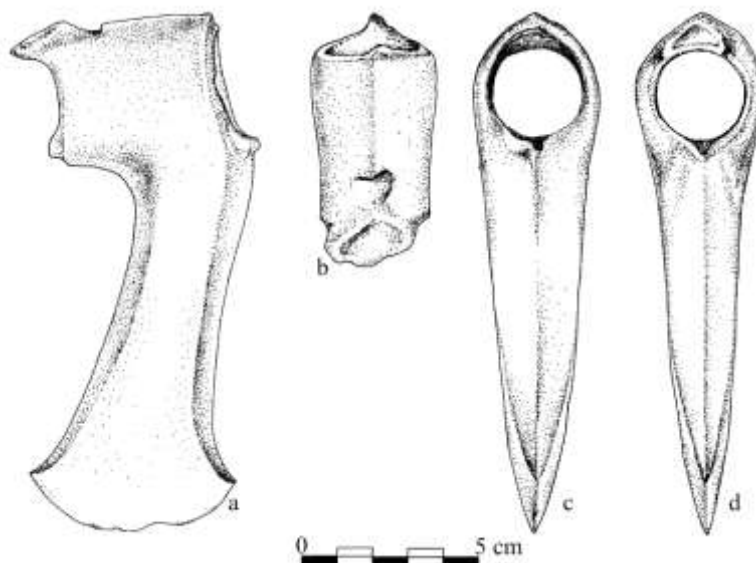


Fig. 1. The axe from Malcoci.

The most southern item was found at Thebes and represents an important chronological landmark for dating the Pătulele<sup>41</sup> type axes. Even though the initial stratigraphical observations were controversial, it was dated to the end of EH II or beginning of EH III<sup>42</sup>.

If we consider the analogies found at long distances, it is impossible not to notice the similarities to some of the axes from north of Caucasus that S. N. Korenevskij attributed to the *Ureki type*, as well as to the two items from the eponymous hoard found in Georgia and attributed to Trialeti culture<sup>43</sup>, together with the axe from the Samara<sup>44</sup> hoard and the two isolated finds at Lečkop<sup>45</sup> and Stavropol<sup>46</sup>.

<sup>35</sup> Černych 1978, 143, fig. 25/4.

<sup>36</sup> Černych 1978, 143, fig. 25/5.

<sup>37</sup> Černych 1978, 143, fig. 25/6.

<sup>38</sup> Kovačeva 1967, 55, fig. 5; Černych 1978, 202, fig. 40/11.

<sup>39</sup> Černych 1978, 141-142, Fig. 23/5; 24/1, 6.

<sup>40</sup> Hänsel 1976, 39, Taf. 3/3-8; Černych 1978, 243-248, fig. 67/1-3.

<sup>41</sup> Vulpe 1997a, 35; Vulpe 1997b, 44.

<sup>42</sup> Maran 1989, 129-130.

<sup>43</sup> Černych 1992, 114, fig. 37/1-2.

<sup>44</sup> Korenevskij 1981, 31, fig. 10/5-6.

<sup>45</sup> Korenevskij 1981, 31, fig. 10/7.

<sup>46</sup> Korenevskij 1981, 31, fig. 10/8.

At present, the spreading area of Pătulele type axes can be set in the southern part of Transylvania, Walachia, Moldavia, Oltenia, Banat, Dobruđja, Bulgaria, while the axes found at Thebes and at north of Caucasus can be attributed to long distance exchange.

The stratigraphic context of the find at Thebes (end of EH II–beginning of EHIII), dated to ca. 2500-2000 BC by traditional chronology or to 2800-2200 BC by <sup>14</sup>C CAL<sup>47</sup> should be the starting point for the chronological dating of this type of axe (Pătulele). Even though most items are isolated finds, there are solid arguments for dating this type of axe starting with the Middle Bronze Age. This idea is supported by the association with Balşa and Pădureni type axes found in the hoards from Arcuş and Sânzieni, and the Pătulele type axe found in Mircea Vodă (Dâmboviţa County) settlement<sup>48</sup> attributed to Tei culture. On the Romanian territory, the Pătulele type axes are dated to the first part of the Romanian Middle Bronze Age<sup>49</sup> which, according to A. Vulpe, begins in 2400-2200 BC, corresponding to the crystallization of Monteoru, Wietenberg, Tei and Otomani cultures<sup>50</sup>. Although most arguments plead in favor of this dating, it is very possible that these axes had been used up to the Late Bronze Age, as shown by the finds in the hoards from Vărbica II and Pobit Kamâk (Bulgaria), which also contain other items that can be dated to this period<sup>51</sup>.

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As shown by the metallographic analysis, the axe found at Malcoci, as the one found at Niculiţel<sup>52</sup>, is made of copper and the insignificant percentage of As excludes the use of "arsenical bronze" that seems to have been used to make some of the axes found on Bulgarian territory.<sup>53</sup>

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<sup>47</sup> Vulpe 1997a, 44.

<sup>48</sup> Vulpe 1970, 38.

<sup>49</sup> Vulpe 1970, 39.

<sup>50</sup> Vulpe 1997b, 39.

<sup>51</sup> Kovačeva 1967, 55, fig. 5.

<sup>52</sup> I take advantage of this occasion to draw attention to an error occurred when the axe from Niculiţel was published (Ailincăi 2005); the axe's green colored patina determined us to believe it was made of bronze. The metallographic analysis – Cu–99,85%; Fe–0,08%; Pb–0,06 (As–75%); As–3677 ppm; Ag–1438 ppm – undergone after the publication contradicts this statement.

<sup>53</sup> E. N. Černych places the axes T 14, 16 and 18 in the VII-IX chemical groups (Černych 1978, 132, 150, Tab. III.6)

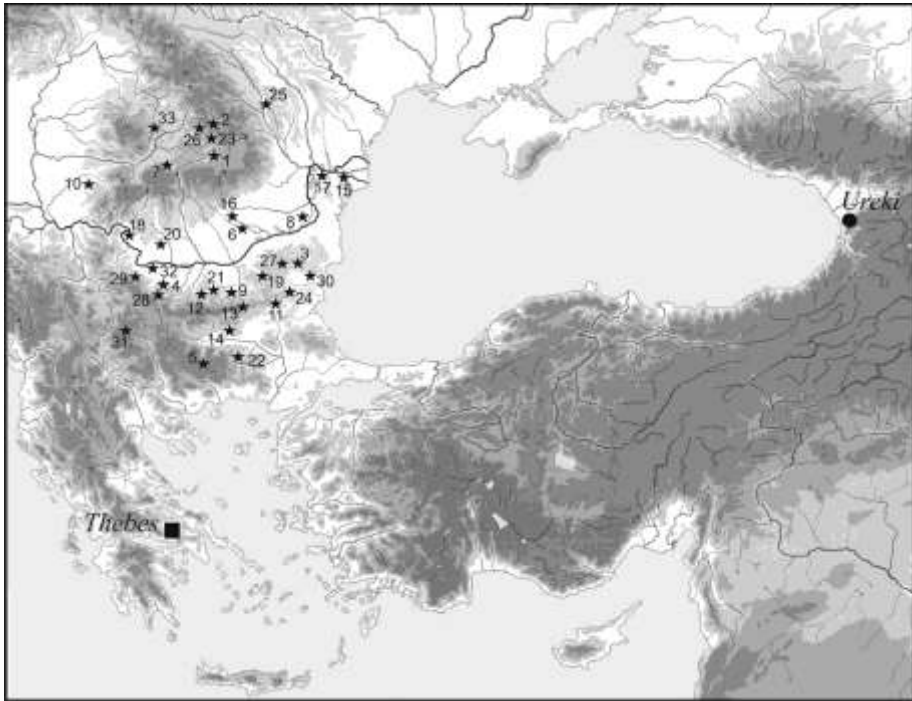


Fig. 2. The spreading area of Pătulele type axes.

1. Arcuș; 2. Avrămești; 3. Belovo; 4. Bjala Slatina; 5. Bjaženica; 6. București; 7. Bunești; 8. Coslogeni; 9. Emen cave; 10. Fibiș; 11. Jambol; 12. Kajlyk; 13. Kazanlyk; 14. Lozen; 15. Malcoci; 16. Mircea Vodă; 17. Niculițel; 18. Pătulele; 19. Pobit Kamâk; 20. Podari; 21. Prelom; 22. Raven; 23. Sânzieni; 24. Sava; 25. Scărișoara; 26. Șoimușu; 27. Șumenskuj; 28. Ugyrčin; 29. Vărbica II; 30. Varna; 31. Vetren; 32. Vidin; 33. Zlatna.

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Despite the numerous archaeological investigations undergone in Dobrudja, the Bronze Age is still one of the least known historical periods in this territory. In effect, after the cultures known as Cernavodă I, III and II (in chronological order) that are dated to the end of the Eneolithic and the transition period, in all chronological charts made up by specialists there is a big void up to the Late Bronze Age, when some of the finds attributed to Coslogeni or Noua culture have been dated.

This *hiatus* can be partially filled in by some isolated finds and some of the investigated tombs. The isolated finds from the southern part of Dobrudja, as those at Histria–Capul Viilor, Rasova–Malul Roșu, Dervent, Neptun and Medgidia, seem to illustrate the existence of a cultural horizon from the beginning of the Bronze Age, corresponding to one of the phases of

the lacustrine settlement at Ezerovo<sup>54</sup>. At the same time, in the period encompassing the Early and Middle Bronze Age, the northern territory between the Danube and the Black Sea was inhabited by nomad populations from the north of the Black Sea. Who can be mainly attributed to cultures Jamnaja and Katakombnaja, to which there were also attributed the tumuli investigated at Baia-Hamangia<sup>55</sup>, Chilia Veche-Ciorticut<sup>56</sup>, Luncavița-Movila Mocuța<sup>57</sup> and Drumul Vacilor<sup>58</sup>, Mihai Bravu<sup>59</sup> Enisala-La Bălțița<sup>60</sup>, Nalbant<sup>61</sup>, Tulcea-Sud, Sabangia, Sarichioi, Zebil<sup>62</sup>, Murighiol<sup>63</sup> etc.

These populations can also be connected to the presence in Dobrudja of several eastern origin items, such as the two axes discovered at Mahmudia<sup>64</sup> and one of the axes from Măcin<sup>65</sup>. In our opinion, in the Bronze Age, the above mentioned cultures, to which we could also add Mnogovalikovaja (KMK) culture, whose presence in Dobrudja is still uncertain, have ensured a permanent contact between the northern and northeastern Pontic areas, especially in the east Carpathian space.

The Pătulele type axes discovered in northern Dobrudja can be undoubtedly attributed to one of the above mentioned cultures and represents a proof of the contact with the autochthonous populations (probably Tei or Monteoru cultures) that created and used this type of axe. It is not impossible that this could explain the similarity between Ureki and Pătulele type axes, as well as the presence of a large number of north Pontic items, especially in the eastern part of the present-day Romanian territory.

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<sup>54</sup> Irimia 1981, 349.

<sup>55</sup> Pârvan 1925.

<sup>56</sup> Vasiliu 1995a, 49-87.

<sup>57</sup> Vasiliu 1995b, 89-115.

<sup>58</sup> Vasiliu 1995c, 117-140.

<sup>59</sup> Vasiliu 1995d, 141-175.

<sup>60</sup> Vasiliu 2003-2004, 123-136.

<sup>61</sup> Vasiliu 2008, 41-62.

<sup>62</sup> Simion 2003a, 13-50.

<sup>63</sup> Simion 2003b, 51-62.

<sup>64</sup> Vulpe 1970; Lăzurcă 1977, 302, pl. 1/2.

<sup>65</sup> Vulpe 1970.

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Fig. 3. The axe discovered at Malcoci.