

## CONTACTS OF THE EARLY PERIOD OF THE BADEN CULTURE IN THE LIGHT OF A UNIQUE VESSEL TYPE

### The problem of the so-called Bratislava type bowls

*Abstract:* The so-called Bratislava type bowl, a wide-mouthed flat vessel decorated with lavish patterns of spirals and incised lines and triangles, is perhaps one of the most attractive pottery wares of the Baden culture. The vessels are usually ornamented on both sides. Surprisingly enough, very few specimens of this vessel type with its distinctive ornamentation are known. Only a few dozen have been recovered from the entire Baden distribution and most of them are stray finds without any context. This may be one of the reasons why its function (bowl or lid?) has not been determined. Its chronological position was also uncertain for a long time. We know that this distinctive pottery type was a characteristic vessel of the Boleráz group in the early period of the Baden culture.

*Key words:* Late Copper Age, Bratislava type bowl, wagons, chronology, contacts

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The first fragment of the richly decorated vessel type was published by Š. Janšák in 1931 from the Bešenov (Besenyő)–Malomgát site (Fig. 8:11).<sup>1</sup> The exterior of the fragment is ornamented with a pattern of spirals and dots, while the interior is covered with a network pattern. The author dated this fragment to the Late Neolithic. The next fragment was published by J. Glišić from Gladnice (Fig. 2:7).<sup>2</sup> This lavishly ornamented piece was found during the excavation of cave site in 1959. The author dated the Gladnice site to the Early Bronze Age, and regarded it as the first site of the Baden–Kostolac culture in Kosovo.<sup>3</sup> He believed that the finds of the Bujanj-Hum culture, such as the fragment of a bowl with the distinctive ornamentation, were also recovered from the site.<sup>4</sup>

I. Ecsedy and P. Medović published vessels with spiral ornaments. I. Ecsedy published the fragment of a lid with spiral ornament from trench 6/II opened during the excavation of mound 6 at Kétegyháza (Fig. 7:7)<sup>5</sup> that allegedly came from a Cernavoda III settlement. I. Ecsedy did not mention the find context of this lid and only published its photo.<sup>6</sup>

P. Medović published fragments with spiral ornaments that were defined as lid fragments from the settlement unearthed at the Brza Vrba site near Kovin (Fig. 4:1; Fig. 8: 4).<sup>7</sup>

<sup>1</sup> Janšák 1931, Tab. XXII, without a number.

<sup>2</sup> Glišić 1961, T. 1.2a-c.

<sup>3</sup> Glišić 1961: 143.

<sup>4</sup> Glišić 1961: 143.

<sup>5</sup> Ecsedy 1973: 9, Fig. 14.

<sup>6</sup> Ecsedy 1973, Fig. 14 = Ecsedy 1979, Pl. 15.1.

<sup>7</sup> Medović 1976a, Taf. II. 9; Medović 1976b, Taf. V. 16a-b, Taf. VI. 10c = Taf. XIV. 9a-c.

Although he gave a detailed description of the ornamentation, he did not discuss the artefact itself.<sup>8</sup> He assigned the site to the Cernavoda III culture.<sup>9</sup>

V. Němejcová-Pavúková published one of the bowl fragments from Bratislava in her 1981 study (Fig. 4:2).<sup>10</sup> The fragments were unearthed by P. Baxá and L. Kaminská during the renovation of the Pálffy palace in 1976. V. Němejcová-Pavúková quoted the bowls with spiral ornaments as typological proof for the contemporaneity of the Bulgarian Mihalič horizon (Ezero culture) and the Baden culture.<sup>11</sup> The vessel type is assigned to the Baden Ib phase in V. Němejcová-Pavuková's typological table.<sup>12</sup>

The finds unearthed together with the vessel fragment from Bratislava were analysed by Baxá–Kaminská. The authors dated the find material to V. Němejcová-Pavúková's Baden Ic phase.<sup>13</sup> Other fragments of this vessel type decorated with this distinctive ornamentation, mentioned earlier by Pavúková, were published in their study (Fig. 8:6,9–10,12).<sup>14</sup> Baxá–Kaminská determined them as lids. The authors only gave a short description of the fragments with spiral ornaments that they considered to be a southeastern (Ezero culture) element in the Baden culture.<sup>15</sup>

V. Němejcová-Pavúková assigned this vessel type to the Baden Ib and Ic phases in her revised system. They are illustrated in the drawings as bowls, but they are not discussed in detail by the author.<sup>16</sup>

The term Bratislava type vessel was introduced by J. Maran in his overview of the vessels with spiral ornaments.<sup>17</sup> He described similar fragments from 11 sites<sup>18</sup> and published drawings of 15 specimens (Figs 2–4).<sup>19</sup> J. Maran's distribution map<sup>20</sup> reveals that the vessels with this distinctive ornamentation occur over a large territory: they appeared in Moravia, Slovakia, eastern Hungary, Yugoslavia, Albania, Greece and southwestern Bulgaria.

J. Maran's study can be complemented with more recent finds from Transdanubia, brought to light in 1996. During the excavations preceding the construction of a highway bypass at Szekszárd, Attila Gaál investigated a site marked as S-9 at Tolna–Mözs. The site yielded several vessel fragments from four different features; unfortunately, in two cases (features 158 and 179) the objects could not be reconstructed.<sup>21</sup>

*Feature 158.* A reddish brown bowl with grey spots. The rim is horizontal, the base is flat. The rim is ornamented with two bundles of three parallel lines incised obliquely in alternate directions. The interior bears a network pattern of regularly incised lozenges (Fig.

<sup>8</sup> Medović 1976a: 108.

<sup>9</sup> Medović 1976a: 105; Medović 1976b: 18.

<sup>10</sup> Němejcová-Pavúková 1981: 276, Obr. 12.2.

<sup>11</sup> Němejcová-Pavúková 1981: 294. (V. Němejcová-Pavúková refers to Kaminská – Baxá 1981 (sic!). The study she referred to appeared in 1984, Pavúková knew the finds from the manuscript of her colleagues.)

<sup>12</sup> Němejcová-Pavúková 1981, Obr. 2. type I.

<sup>13</sup> Baxá – Kaminská 1984: 194.

<sup>14</sup> Baxá – Kaminská 1984, T. II.1, 3-5, 7; T. VI.3-5; T. VII.4.

<sup>15</sup> Baxá – Kaminská 1984: 192.

<sup>16</sup> Němejcová-Pavúková 1981, Obr. 11. and Obr. 33.

<sup>17</sup> Maran 1997; Maran 1998a; Maran 1998b.

<sup>18</sup> Maran 1997, Abb. 8; Maran 1998a, Abb. 6; Maran 1998b, Taf. 73.

<sup>19</sup> Maran 1997, Abb. 6-8; Maran 1998a, Abb. 3.6-12, Abb. 4-5; Maran 1998b, Taf. 1-3; Taf. 4-1-2.

<sup>20</sup> Maran 1998a, Abb. 6.

<sup>21</sup> The find material from site S-9 is being analysed by the team of Attila Gaál. Here I would like to thank Attila Gaál for taking part in the work of the team with the analysis of Baden material. I would also like to express my thanks to János Ódor for the generous help, which afforded the prompt analysis of the bowl. I am grateful to Lucia Glattfelder-McQuirk, senior restorer for the reconstruction and to Tibor Marton, archaeologist, for the drawings.

5:1b, Fig. 6:1a). The exterior is richly decorated. The base bears a large spiral ornament. The outer arc of the spiral is framed with triangles. The vessel body is decorated with four symmetrical, similarly incised spirals on the exterior. The fields between the spirals are filled with incised V motifs, their points sliding into one another (Fig. 5:1a, Fig. 6:1b–1c). Md. 34 cm, H. 8 cm.

Thanks to János Ódor, the fragments of four other bowls were found among the pottery fragments from three other features; one of these could be reconstructed.

*Feature 179.* Reconstructed from the fragments of a brownish, flat, richly ornamented bowl. The interior is undecorated. The rim is ornamented with two rows of triangles with the points facing each other (Fig. 5:2b, Fig. 6:2a). A large spiral motif and three, symmetrical, smaller spirals can be seen on the base of the vessel on the exterior. The rim of the bowl is ornamented with V motifs sliding into each other, set within four, symmetrically arranged panels. This pattern is framed with triangles. Four small scrolls can be seen under the V motifs and between the spirals (Fig. 5:2a, Fig. 6:2b). Md. 20 cm, H. 4 cm.

*Feature 52/B.* Fragments of a grey bowl with worn surface. The rim is decorated with two rows of triangles with the points facing, with the occasional trace of encrustation (Fig. 7:2a). The surface is worn on the interior, but traces of a lightly incised rhomboid network pattern can still be made out. The exterior bears a spiral ornament framed with triangles (Fig. 7:2b,3–5). V motifs sliding into each other were placed beside the spiral also with stabbed technique (Fig. 7:2b), sometimes with the traces of encrustation. Md. c. 26 cm.

*Feature 192.* The richly decorated fragment of a brown bowl. The rim is decorated with two bundles of three parallel lines incised in alternate directions. The interior is divided into panels filled with a herringbone-like pattern with sharp incisions. The exterior is densely decorated with triangles and incised bundles of lines beside them (Fig. 7:1). There was no trace of a spiral ornament on the fragment. Md. ca. 26 cm. Another fragment of the same type was found in the feature: the fragment of a greyish bowl with a worn surface. The exterior is decorated with an incised spiral pattern in the stab-and-drag technique with traces of encrustation. An indistinct incised network pattern can be observed on the interior. 5 x 2.7 cm (Fig. 7:6).

Beside the fragments described above, a number of other published fragments that were omitted from J. Maran's corpus can also be cited.

P. Medović published fragments from Vršac (Fig. 8:5)<sup>22</sup> and Brza Vrba (Fig. 8:4)<sup>23</sup>. The latter was found in the same pit as the bowl mentioned above (Fig. 4:1a–b). It may have been part of the same bowl, although Medović<sup>24</sup> did not indicate a connection between the two fragments, and they were inventoried under different numbers.

Baxá–Kaminská republished the fragment ornamented on both sides (Fig. 8:11) from Bešenov (Besenyő) in Slovakia that had been published by Janšák,<sup>25</sup> this time with correct dating.

Baxá–Kaminská published additional fragments from Bratislava (Fig. 8:6,9–10,12).<sup>26</sup> Although at first glance, the fragments from Bratislava appear to come from the bowl reconstructed by V. Němejcová-Pavúková (Fig. 4:2a–b), but they came from other bowls.<sup>27</sup>

<sup>22</sup> Medović 1976b, T. VII.4.

<sup>23</sup> Medović 1976b, T. V.16a–b.

<sup>24</sup> Medović 1976b: 11.

<sup>25</sup> Baxá – Kaminská 1984, T. VII.4.

<sup>26</sup> Baxá – Kaminská 1984, T. VII.1 (= Fig. 8:12); T. II.3 (= Fig. 8:10); T. II.5 (= Fig. 8:9); T. II.7 (= Fig. 8:6).

<sup>27</sup> The undecorated rim certainly proves it in the case Fig. 8:12. At Fig. 8:10 the fragment cannot belong to the reconstructed bowl because of the dense spiral ornament. In Fig. 8:9 there is a spiral of six circles, while there are three circles in the spiral on the reconstructed bowl. Fig. 8:6 illustrates a fragment with

Two more fragments were published by Alexandrov from the Radomir–Vahovo site in Bulgaria (Fig. 8:3, 13).<sup>28</sup> He dated the finds to the Cernavoda III–Boleráz period and regarded them as an indication of cultural contact with the Middle Danube region.

J. Glišić also published another fragment with spiral ornament from Gladnice (Fig. 8:7)<sup>29</sup> that was certainly not part of the other, richly decorated bowl that had been previously published.<sup>30</sup> The reconstruction of the same bowl was recently published again by Govedarica (Fig. 8:1).<sup>31</sup> Govedarica included another bowl from the Loznik site in her study (Fig. 8:8).<sup>32</sup>

It must here be noted that J. Pavelčík's reconstruction of the fragment from Jevišovice (Fig. 8. 2)<sup>33</sup> is not a new bowl, and neither is it an authentic reconstruction. The authentic reconstruction (Fig. 4. 3) can be found in V. Němejcová-Pavúková's<sup>34</sup> and J. Maran's<sup>35</sup> works.

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A glance at the roughly 30 fragments known and published from 15 sites (Fig. 1) reveals that the ornamental repertoire of these bowls was rich and varied. Sometimes they differ only in small details, and sites lying far from each other yielded fragments decorated in a highly similar manner. Certain typological features can be distinguished as regards ornamentation. Five main categories can be established on the basis of the patterns ornamenting the exterior.

**Type 1** comprises the vessels ornamented with concentric circles, with a larger group of circles in the centre, and four, symmetrically arranged concentric circles around it. V motifs sliding into each other cover the area between them on the outer arc of the vessel that is bordered by impressed dots. The finds from Brza Vrba (Fig. 4:1b, Fig. 8:4), Radomir-Vahovo (Fig. 3:5, Fig. 8:3), the Tren cave (Fig. 2:6, Fig. 3:1) and Tolna-Mözs, feature 192 (Fig. 7:6) can be assigned here. The bowl from feature 158 of the Tolna-Mözs site is essentially similar as regards the ornamental concept, the only difference being that instead of concentric circles it has five spiral patterns and the edges of the V motifs shapes sliding into each other, and the spirals are decorated with zigzags (Fig. 5:1a, Fig. 6:1c). The interior of these vessels bears a network pattern. The rim of the bowl from Brza Vrba is undecorated (Fig. 4:1a), while the vessel from feature 158 of the Tolna-Mözs site has two bundles of three small lines incised in alternate directions (Fig. 5:1b, Fig. 6:1a). The rim fragment of the other vessel from Tolna-Mözs is decorated with triangles facing each other in two rows (Fig. 7:2a).

The common feature of the bowls assigned to **type 2** is a scroll ornament on the exterior and an independent spiral motif in the centre. The finds from Bratislava (Fig. 4:2b), Jevišovice (Fig. 4:3b), Bešenov (Fig. 8:11), Gladnice (Fig. 2:7. and Fig. 8:1), Doliana (Fig. 2:1), Podgorie (Fig. 3:2), Petromagula (Fig. 2:4) and Radomir–Vahovo (Fig. 3:6) can be assigned here. The bowl with scroll ornament from Radomir–Vahovo also belongs to this

the closing part of a wide spiral of a double incised line, while only the depression in the width of the lines marks the spiral at the reconstruction.

<sup>28</sup> Alexandrov 1995, Pl. I.2 = Fig. 8:3; Pl. 2.1 = Fig. 8:13.

<sup>29</sup> Glišić 1961, T. II.14.

<sup>30</sup> Glišić 1961, T. I.2c.

<sup>31</sup> Govedarica 1997, Abb. 5.

<sup>32</sup> Govedarica 1997, Abb. 2.

<sup>33</sup> Pavelčík 1973: 384, Taf. 3.10.

<sup>34</sup> Němejcová-Pavúková 1981, Obr. 12.2

<sup>35</sup> Maran 1998a, Abb. 5.2.

type (Fig. 3:3). The branches of the scroll motif adjoin the main ornament in the central part. The vessel from feature 179 of the Tolna–Mözs site also belongs to this group. This vessel has V motifs slipping into each other at four places between the spirals on the exterior that are bordered and connected by a zigzag pattern. A pair of spirals is inserted between the base of the V motifs and the central spiral (Fig. 5:2a, Fig. 6:2b). The fragments from feature 52/b of the Tolna–Mözs site come from a similar bowl (Fig. 7:2–5). These vessels are more difficult to classify in terms of their interior since this part is not always described in the publications. The omission of a description of their interior probably indicates that it was undecorated. The interior of the vessels from Bratislava (Fig. 4:2a) and the bowl from feature 52/B of the Tolna–Mözs site (Fig. 7:2a, 3–4) was decorated with a network pattern, while that of the fragment from Jevišovice was ornamented with irregular incisions (Fig. 4:3a). The interior of the bowl from feature 179 of Tolna–Mözs was undecorated (Fig. 5:2b, Fig. 6:2a). The rim of the fragment from Bratislava bore a zigzag line (Fig. 4:2a), that of the Doliana fragment a patterns of small S motifs (Fig. 2:1). The rim of the Petromagula fragment was decorated with incisions (Fig. 2:2–4), the specimens from Tolna–Mözs had two rows of triangles (Fig. 5:2b, Fig. 6:2a, Fig. 7:2a). The rim of the Jevišovice bowl was undecorated (Fig. 4:3a). It is unclear whether the rim of the vessel fragments from Podgoric (Fig. 3:2) and Gladnice (Fig. 2:7, Fig. 8:1) were decorated or not.

Type 3 comprises the bowls with concentric semicircles from Loznik (Fig. 8:8). The interior is decorated with a network pattern, the rim with incised zigzag lines. Perhaps a fragment from the Tren cave can also be assigned here (Fig. 2:5).

The exterior of the vessels assigned to type 4 is decorated by incised triangles and a spiral or concentric circles in the centre, although this is not always clear from the fragments. Two fragments from Radomir–Vahovo (Fig. 3:4a, Fig. 8:13a) can be assigned here. Horizontal hatching (Fig. 3:4b) or a network pattern (Fig. 8:13b) can be observed on the interior; the rim is undecorated.

The richly ornamented bowls with triangles on the outside that are to date only known from feature 192 of the Tolna–Mözs site have been assigned to type 5 (Fig. 7:1a–b). The interior of the bowls is decorated with herringbone motifs, the rims with two bundles of three short lines incised in alternate directions.

In the case of some fragments it is unclear to which type they belong. These include the fragments from Vršac (Fig. 8:5), Bešenov (Fig. 8:11), Bratislava (Fig. 8:6,9,10) and Gladnice (Fig. 8:7). They could equally well belong to type 1 or type 2. The two fragments from Petromagula (Fig. 2:2–3) are even more uncertain. The specimen from Kétegyháza also differs from the above types, even though it has been suggested that they represent this vessel type (Fig. 7:7). The fragment was not described in detail in the publication. The published photo shows two major differences: it would appear that this vessel was ornamented with narrow ribs and the ornamental pattern also differs from the vessel fragments described above since the two spirals turn toward each other and there are obliquely positioned ribs instead of the usual V motifs slipping into each other between the spirals. The centre of the bowl is missing.

The fragments with a known find context were all recovered from settlements. Some sites — Petromagula, Tren cave, Radomir–Vahovo, Bratislava nad Tolna–Mözs — yielded several fragments of this vessel type.

As has been mentioned above, the function of the Bratislava type vessels is debated. Some scholars consider them to have been lids (Ecsedy, Pavelčík, Medović, Baxá–Kaminská, Alexandrov), while others believe that they were bowls (Němejcová-Pavúková). J. Maran did not take a definite stand on their function, even though these finds are illustrated as lids in the publications.

It is usually difficult to decide whether the interior or the exterior was supposed to be seen during use in the case of vessels that are richly decorated on both sides. If the interior was supposed to be seen, they were evidently flat bowls, whereas if the exterior decoration was significant, they could only be lids.

Some of the Cycladic vessels from Syros (Fig. 9:1–3)<sup>36</sup> and the pottery unearthed recently at Manika on the island of Euboia (Fig. 10)<sup>37</sup> may be of help in determining the function. The ornamentation of these finds and their execution resemble those of the Bratislava type bowls, suggesting a similar conceptual context and function.

The vessels from Syros are frying pans decorated on both sides. One of the most beautiful specimens has a lavish decoration of scrolls on its interior that symbolizes the waves of the sea (Fig. 9:3). Depictions of galleys and death are incised between the waves, suggesting an association between the spiral motif and the sea. This vessel dates from the EC II (2700–2300 BC).<sup>38</sup> According to a recent analysis, ornamented frying pans served religious and ritual purposes, while undecorated ones were common kitchen utensils.<sup>39</sup>

The decoration of the rim and the spiral ornaments on the interior of the frying pan found at Manika (Fig. 10) clearly relate the vessel to the Bratislava type bowls. This pan was found above a grave, suggesting that a grave offering had been placed into it since the pan had also contained animal bones.<sup>40</sup> A number of Cycladic and Anatolian artefacts were recovered from this cemetery: over 20 graves yielded such finds. Davis dated the Manika cemetery to the EBA.<sup>41</sup>

This would imply that the Bratislava type vessels were bowls with a special function. The specimens with known provenance came from settlements. Only in one case (Manika) was a vessel similar to the Bratislava type bowls recovered from a cemetery. In view of the above it seems likely that the vessels used during the burial rite were made in the settlements, explaining why the fragments (broken during baking, poorly fired, spoiled vessels) came from settlements together with common household waste.

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Beside the question of function, the chronological significance of the Bratislava type bowls has also been emphasized lately. In view of their distinctive decoration, they were either classified among the Early Bronze Age bowls with ornamented interiors and, consequently, dated to the Bronze Age, or they were compared to the painted pottery of the Late Neolithic and dated to the Neolithic in the first publications. Based on similarities in ornamentation, it was claimed that fragments similar to the pottery with spiral ornaments also occurred in the layers of Troy II.<sup>42</sup>

<sup>36</sup> *Woytowitsch 1995*, Kat. 11, 171, 530 (with earlier references).

<sup>37</sup> *Davis 1992*: 717.

<sup>38</sup> *Gods and Heroes 2000*, Cat. 14.

<sup>39</sup> *Gods and Heroes 2000*, Cat. 14.

<sup>40</sup> *Davis 1992*: 718.

<sup>41</sup> *Davis 1992*: 714, Note 56.

<sup>42</sup> *Hood 1973*, Fig. 4.1–5.

V. Němejcová-Pavúková linked these vessels to the Ezero culture since bowls with similar ornaments are known from that culture.<sup>43</sup>

Prehistoric research also synchronized these bowls with the Cycladic circle owing to the similarities between their ornamentation.<sup>44</sup>

Brza Vrba<sup>45</sup> and Bratislava<sup>46</sup> provided a secure basis for a correct dating. These bowls can be securely dated to the Cernavoda III–Boleráz period. This dating is supported by the finds from layer V of the Radomir–Vahovo site in Bulgaria that has been assigned to the Boleráz b–c–Cernavoda III culture.<sup>47</sup>

In his analysis of the Aegean-Anatolian contacts of the Baden culture and the well-known arguments for its dating to an earlier period, J. Maran also discussed the Bratislava type vessels from a new perspective. Their appearance in Thessaly provided new evidence for the chronology of the Baden culture in the context of relations between the Carpathian Basin, the Aegean and the Balkans. A layer that was 'absent' at Pevkakia Magula was observed at Petromagula (Thessaly). The Petromagula settlement layer, from which the Bratislava type bowls were recovered, was dated to the later Chalcolithic. This settlement level predates the Trojan Early Bronze Age and the Early Helladic period (Frühhelladikum) both in the western and the eastern Aegean. On the Greek mainland and in the Cyclades, this period is represented by the Akropolis–northern hillside phase (Akropolis–Nordhang Stufe) and it is contemporary with the Pelos–Lakkoudes culture that can be synchronized with the Kumtepe IB phase. According to recent C<sup>14</sup> dates, Kumtepe IB belongs to the later Aegean Chalcolithic and can be dated to the second half of the 4th millennium, i.e. to 3500–3000 BC.<sup>48</sup> Other fragments of Bratislava type vessels are also known from Greece: the finds from the Doliana site (Epirus) can be related to the Albanian Chalcolithic. The finds from Albania (Tren cave, Pogdorie) were recovered from Chalcolithic layers. According to J. Maran this indicates that they cannot be dated to the Cycladic period. He emphasized that the vessels occurring as far as Central Greece supported an earlier date for the Baden culture that, in turn, meant that the Baden culture should be synchronized with the Pre-Early Helladic period (Vor-Frühhelladikum) in Greece.<sup>49</sup> J. Maran suggested that the Bratislava type bowls spread from north (Central Europe) to south (the Balkans and Greece).<sup>50</sup> He explained the appearance of the vessel type over an extensive area with trade contacts. During the Baden culture, the former abundance of metals declined conspicuously and J. Maran therefore ruled out the possibility of trade in metals. He explained the decline of metallurgy with the depletion of exploitable ore sources and the lack of high quality mining technology. He suggested two new commodities that may have been traded: obsidian<sup>51</sup> and wool.<sup>52</sup>

<sup>43</sup> Němejcová-Pavúková 1984: 144–145.

<sup>44</sup> Hauptman 1986: 19.

<sup>45</sup> Medović 1976.

<sup>46</sup> Němejcová-Pavúková 1981: 294; Baxá – Kamisná 1984.

<sup>47</sup> Alexandrov 1994: 117.

<sup>48</sup> Maran 1998a: 508–509.

<sup>49</sup> Maran 1998a: 509.

<sup>50</sup> Maran 1998a: 509, 512.

<sup>51</sup> Maran 1998a: 515–516. Recent raw material analyses have demonstrated that obsidian raw materials can be connected with Hungarian and Slovakian sources in the Late Neolithic and Chalcolithic, and the same was true in case of two samples from the Early Bronze Age. It means that exchange contacts that existed from the 5th Millennium could also exist at the time of the Baden culture.

<sup>52</sup> The sheep type developed in the Early Near East in the 7th–5th Millenniums (so-called woolly sheep, Wollschafe) could be demonstrated in large numbers in the animal bone materials in Central and South-East-Europe as well from the 2nd half of the 4th Millennium. This gave J. Maran the idea to suggest the possibility of sheep and wool trading (Maran 1998a: 516).

Wagons were cited by J. Maran as further evidence for dating the Baden culture to the second half of the 4<sup>th</sup> millennium. Chariots demonstrably existed in Northern and Central Europe, in the Pontus region and also in Mesopotamia from the second half of the 4<sup>th</sup> millennium. They were commonly used because of the intrinsic economic serviceability, and this certainly contributed to their fast dissemination over a large territory.

Maran challenged the Mesopotamian origin of wagons and suggested instead that wheeled transport spread southward from the Carpathian Basin. Precise and reliable dates for the Near Eastern and Greek models of vehicle and depictions would certainly be useful for solving this problem. He argued that the wagon spread rapidly after its invention.<sup>53</sup>

J. Bakker, J. Kruk, A. Lanting and S. Milusauskas came to a similar conclusion as regards the dating of wagons. The C<sup>14</sup> dates of the wheel models they collected, the wagon depiction on the Bronocice vessel, the wagon tracks in the megalithic grave at Flintbek in northern Germany, as well as the pictograms of wheels found in Uruk suggest that chariots appeared in Europe and in Mesopotamia at approximately the same time, or that they swiftly spread from Mesopotamia to Europe.<sup>54</sup> They tend to accept the latter version.<sup>55</sup>

M. Johnson arrived at the same chronological results, independently of J. Maran. He systematically collected the C<sup>14</sup> dates for various raw materials.<sup>56</sup> From his analysis of the typological and stratigraphic data and their comparison with calibrated dates, he concluded that the Rachmani culture was contemporary with the southern Greek Late Neolithic (FN). The transitional period between the end of the FN and the EBA can be synchronized with the Boleráz group and can be dated to between 3700 and 3300 BC. It was followed by the EH I–classical Baden period between 3300 and 2800 BC. He also noted that these dates are not conclusive since the start of the FN–EBA transition is uncertain.<sup>57</sup>

This brief overview shows that the Near Eastern and Anatolian contacts have been re-evaluated and, also, that more recent views sometimes wholly contradict earlier ones owing to the rejection of the historical chronology. Anatolia that had for a long time been regarded as the cradle of many innovations that spread to Southern and Central Europe and even farther to the west through the Aegean, the Balkans or the Pontus region, seems to have been neglected recently. It has also been argued that this dissemination actually occurred the other way round, with innovations spreading to the Aegean–Anatolian culture province from southern Germany and/or Central Europe in certain cases. In the present study we shall not address the problem of the direction of the dispersion of certain objects. Still, it must be borne in mind that unique objects that occur in small quantities are difficult to date precisely and that their cultural associations can hardly be based on formal similarities or C<sup>14</sup> dates taken from their context.

The dating of the Baden culture has changed in recent decades.<sup>58</sup> In consequence of the dendrochronological dates for the south German Late Neolithic and the latest C<sup>14</sup> dates from Greece, the chronological position of the Baden culture has been shifted to 3500–3000/2800 or 3700–2800 BC. This means that instead of the formerly suggested contemporaneity with the Aegean–Anatolian Early Bronze Age, it is now dated to the transitional

<sup>53</sup> Maran 1998a: 521.

<sup>54</sup> Bakker – Kruk – Lanting – Milusauskas 1999: 778.

<sup>55</sup> I do not deal with the wagons in detail in this study. I wish to discuss this problem in another study analysing a new wagon model (Balatonberény, Somogy c.).

<sup>56</sup> Johnson 1999: 322–327.

<sup>57</sup> Johnson 1999: 333.

<sup>58</sup> Both J. Maran and M. Johnson mention that the dating that has been commonly accepted was already published by E. Neustupný and C. Renfrew as early as in 1968, 1970, 1971.



period between the Greek Late Neolithic (FN) and Early Bronze Age (EBA), i.e. to the Chalcolithic. Beside the Copper Age wagons, the Bratislava type bowls offer further proof in support of this dating. The recently investigated Hungarian site (Tolna–Mözs) may provide additional evidence after the analysis of the rich find material. However, the essential question remains, namely whether the bowls ornamented in an identical manner and distributed over a large territory are really contemporary. As we have seen there are no C<sup>14</sup> dates for all the sites and even in the case of ones that do, the dates were taken from a variety of samples (bone, pottery) that makes their comparison difficult. The invention of wagons undoubtedly alleviated transportation but it seems to be an exaggeration that it spread like wildfire. The heavy carriages of the Copper Age drawn by cattle did not allow a particularly great speed, and we therefore have to assume a time lag between the various sites. Unfortunately, the currently available evidence is insufficient for refining the datings and it does not bring us any closer to determining the direction of the distribution of certain objects. Additional finds from secure contexts and their precise dating is necessary to answer these questions.

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Fig. 1. Distribution of Bratislava type bowls. 1: Jevišovice; 2: Bratislava; 3: Bajč-Vlkanovo; 4: Kétegyháza; 5: Brza Vrba; 6: Radomir-Vahovo; 7: Gladnice; 8: Podgorie; 9: Tren cave; 10: Petromagula; 11: Doliana; 12: Bešenov; 13: Tolna-Mözs; 14: Loznik; 15: Vršac

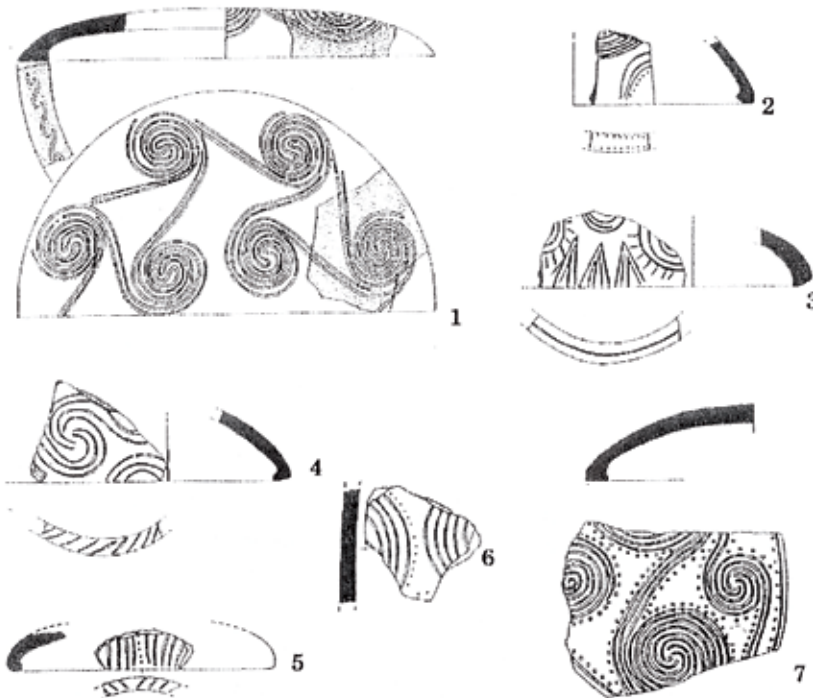


Fig. 2. Bratislava type bowls. 1: Doliana; 2-4: Petromagula; 5-6: Tren cave; 7: Gladnice (after *Maran 1998a*, Abb. 4. Scale: ca. 1:4)

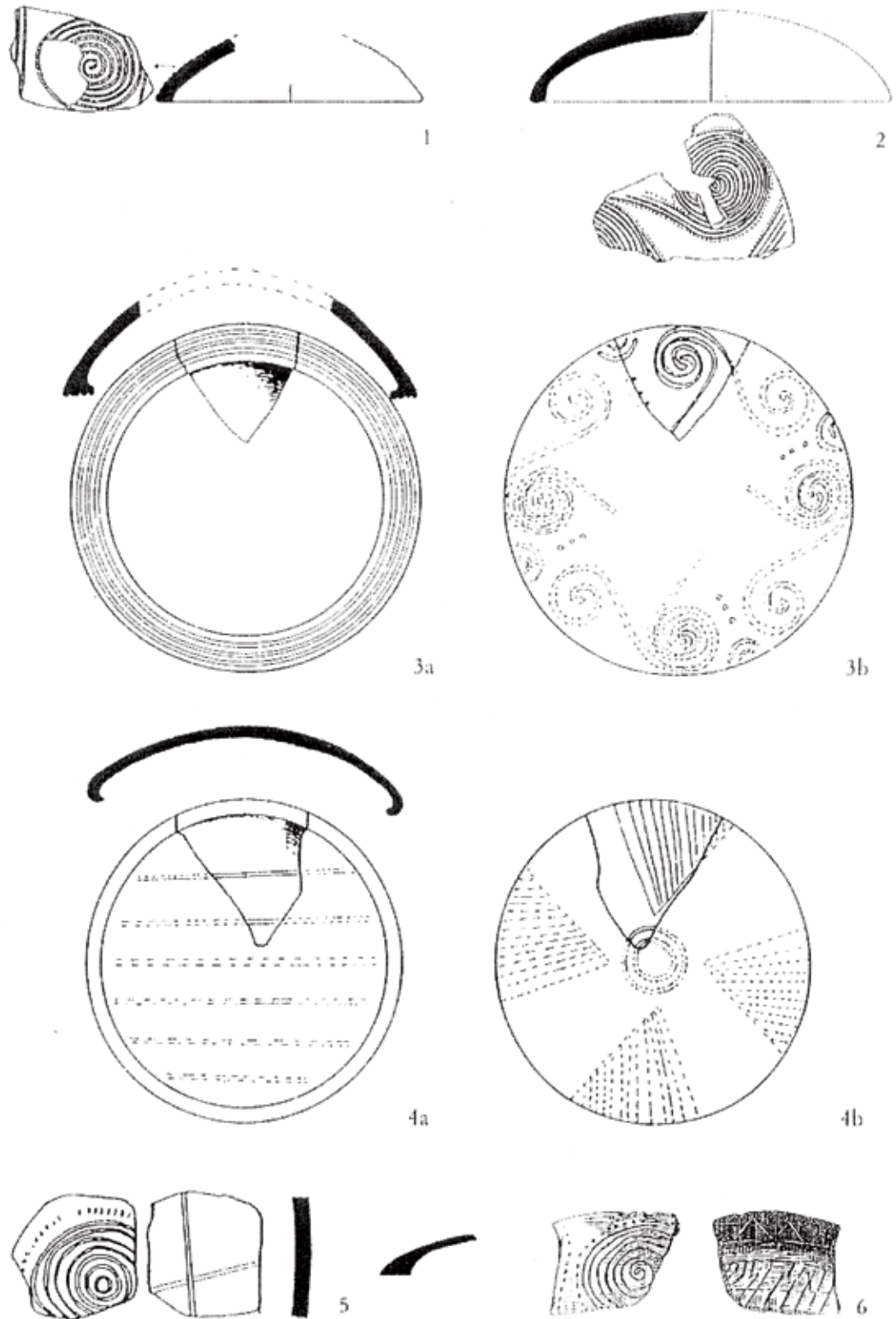


Fig. 3. Bratislava type bowls. 1: Tren cave; 2: Podgorie; 3–5: Radomir–Vahovo; 6: Bajč–Vlkanovo (after *Maran 1998a*, Abb. 4. Scale: ca.1:4)

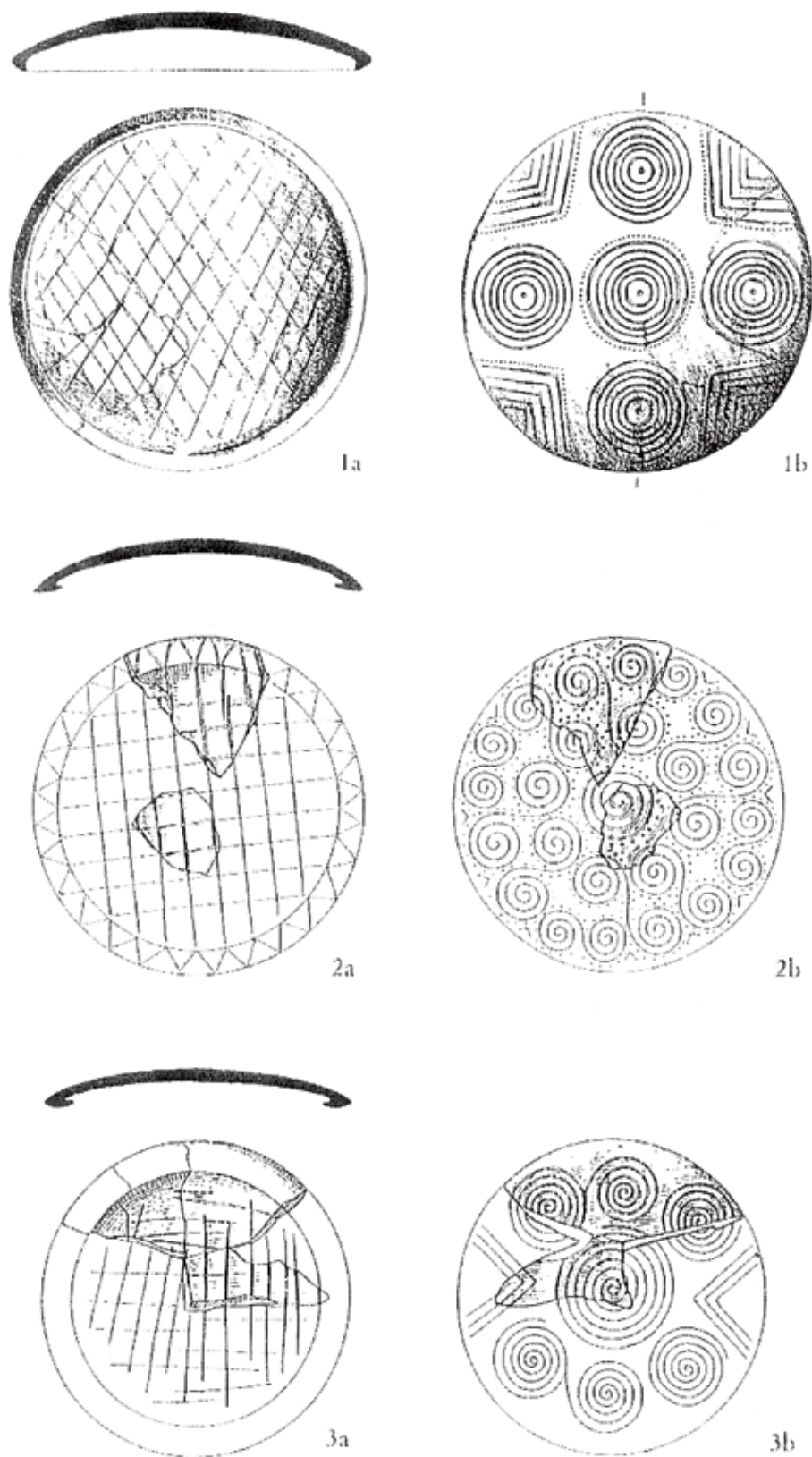


Fig. 4. Bratislava type bowls. 1: Brza Vrba; 2: Bratislava; 3: Jevišovice (after *Maran 1998a*, Abb. 5 Scale: 1: ca. 1:4, 2-3: ca. 1:3)

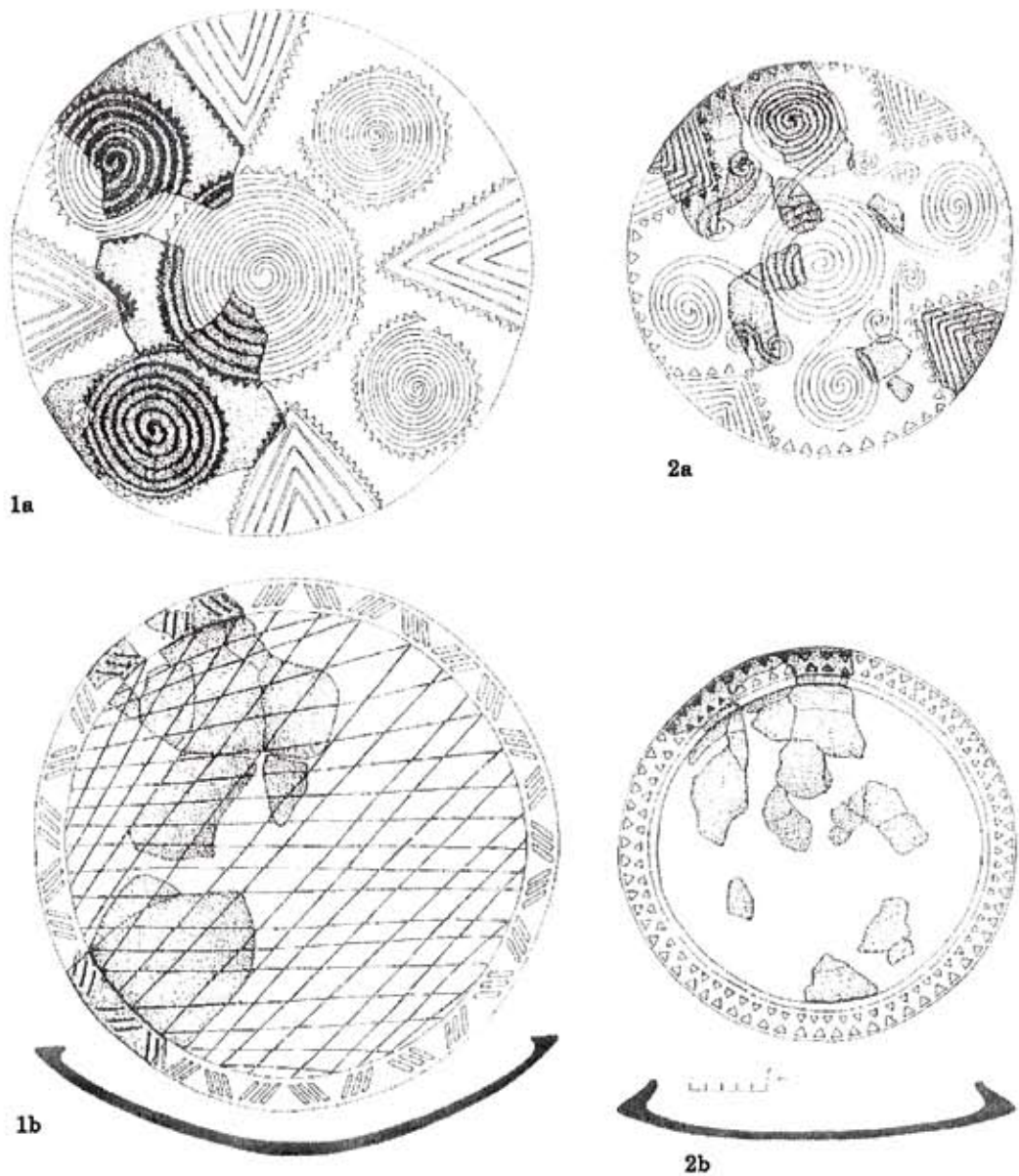


Fig. 5. Bratislava type bowls. 1: Tolna-Mözs, feature 158; 2: Tolna-Mözs, feature 179 (Scale: 1:4)

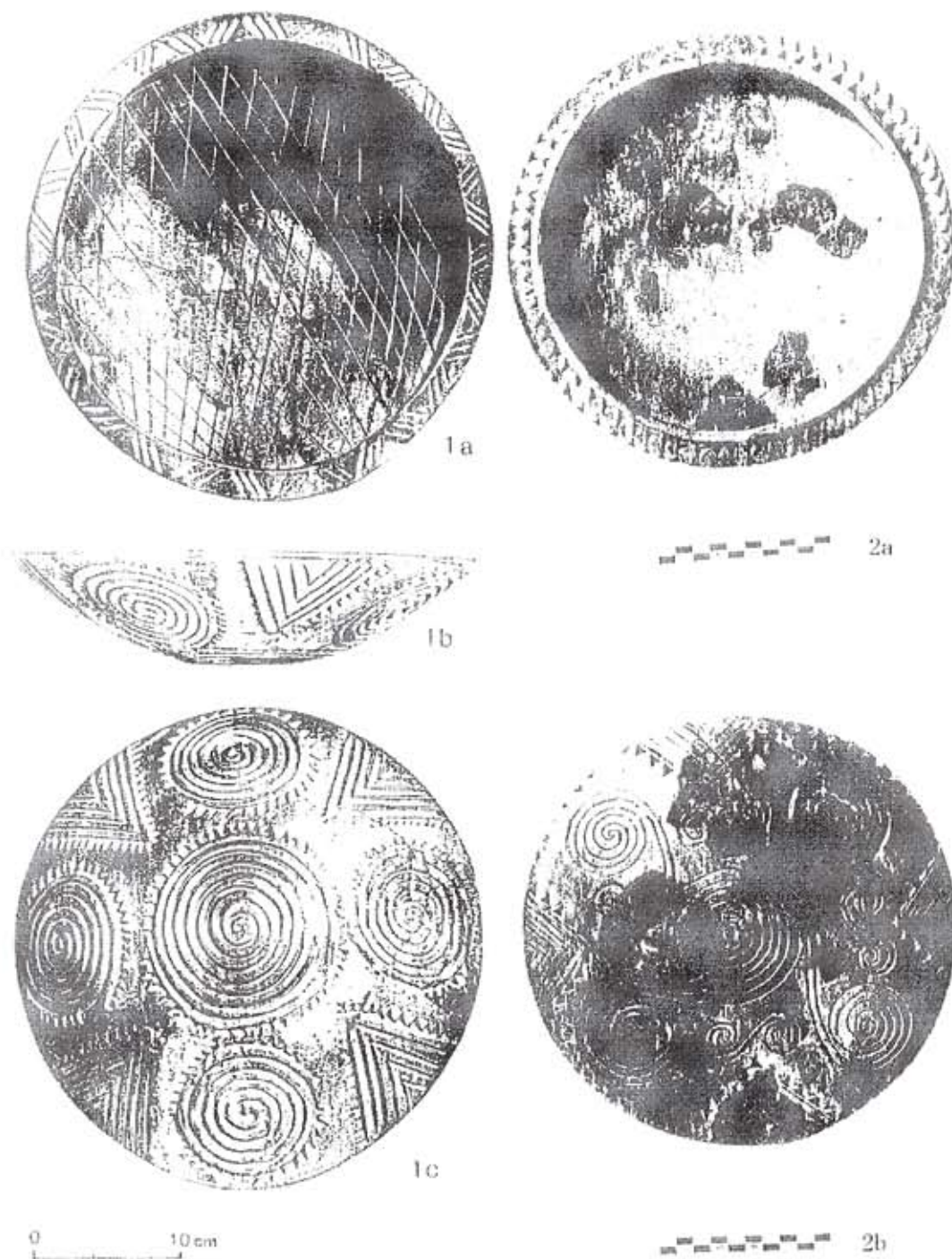


Fig. 6. Bratislava type bowls. 1: Tolna-Mözs, feature 158; 2: Tolna-Mözs, feature 179 (Scale: 1:4)

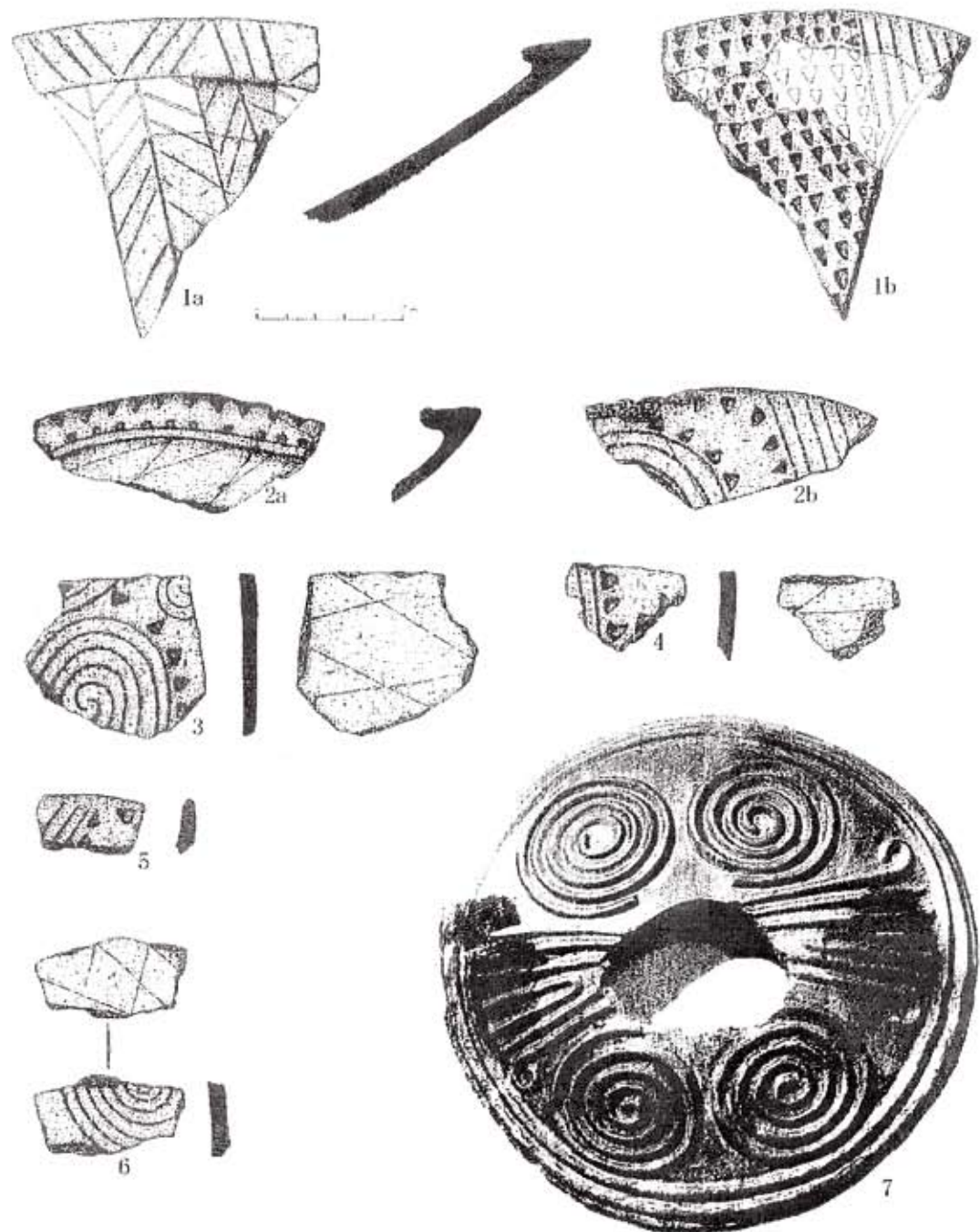


Fig. 7. Bratislava type bowls. 1, 6: Tolna-Mözs, feature 192; 2-5: Tolna-Mözs, feature 52/B; 7: Kétegyháza (after *Ecsedy 1973*) (Scale: 1-6: 1:2, 7: unknown)



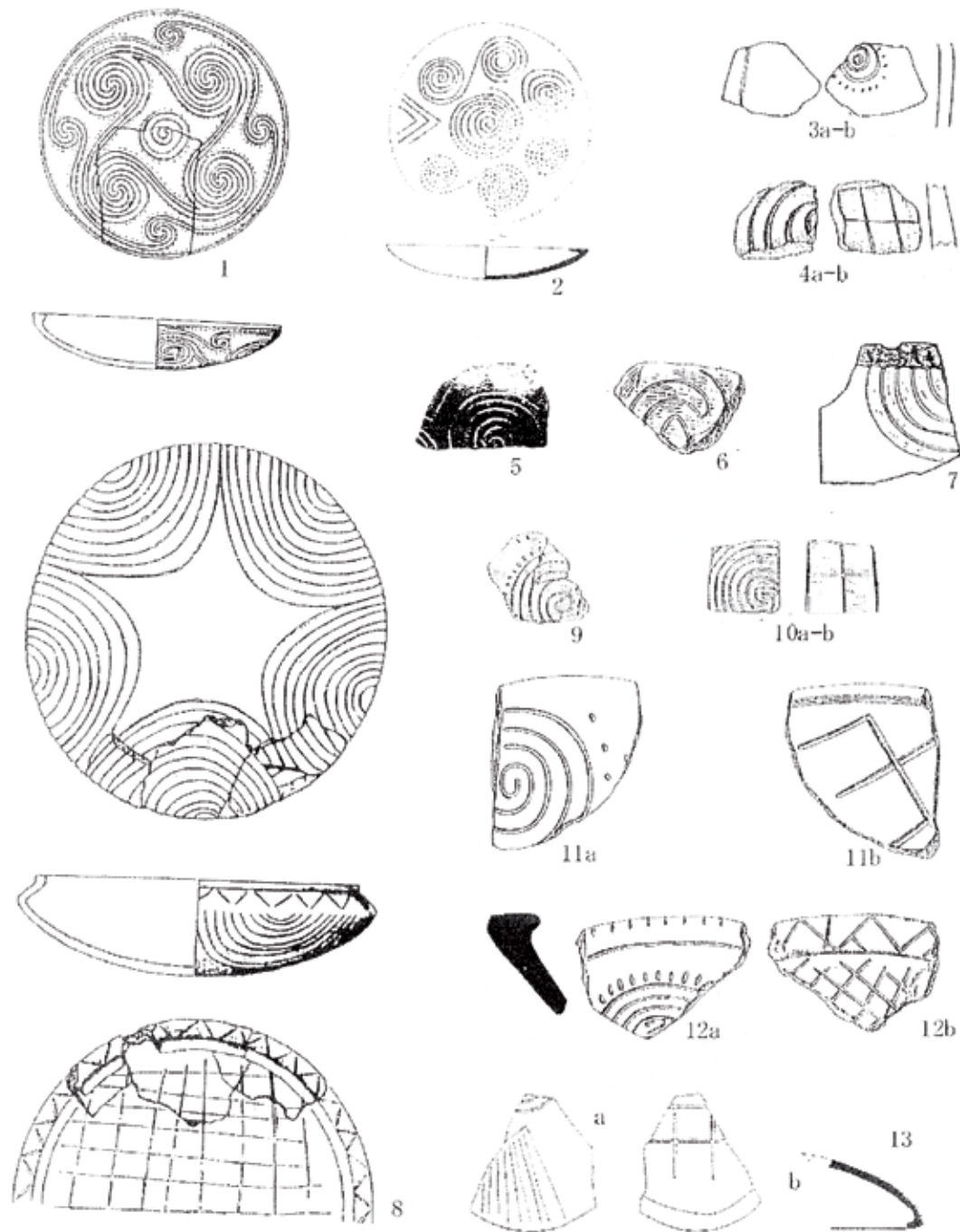


Fig. 8. Bratislava type bowls. 1: Gladnice (after *Govedarica 1997*); 2: Jevišovice (after *Pavelčík 1973*); 3: Radomir–Vahovo (after *Alexandrov 1994*); 4: Brza Vrba (after *Medović 1976b*); 5: Vršac (after *Medović 1976a*); 6: Bratislava (after *Baxá–Kaminská 1984*); 7: Gladnice (after *Glišić 1961*); 8: Loznik (after *Govedarica 1997*); 9–10: Bratislava (after *Baxá–Kaminská 1984*); 11: Bešenov (after *Baxá–Kaminská 1984*); 12: Bratislava (after *Baxá–Kaminská 1984*); 13: Radomir–Vahovo (after *Alexandrov 1995*) (Scale: 1, 8: ca: 1:3, the rest are unknown)

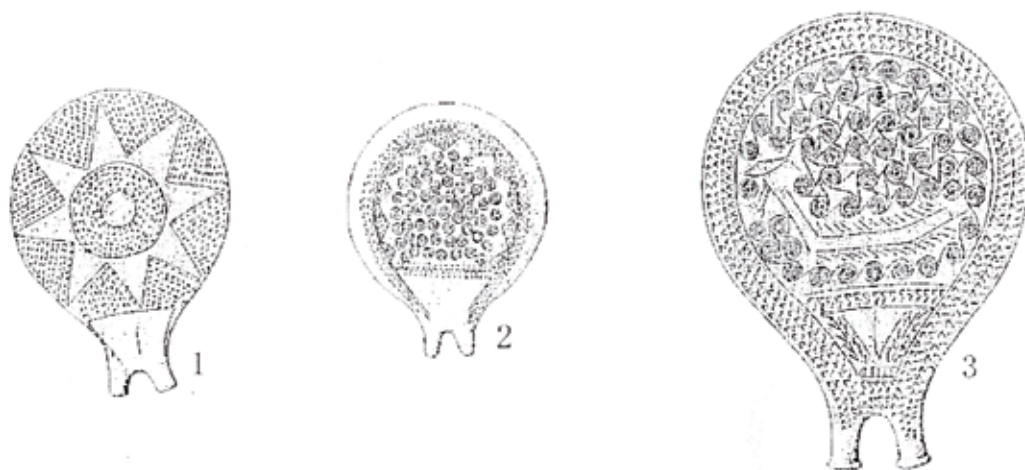


Fig. 9. 1–3: Cycladic frying pans. 1–3. Syros (after *Woytowitsch 1995*)

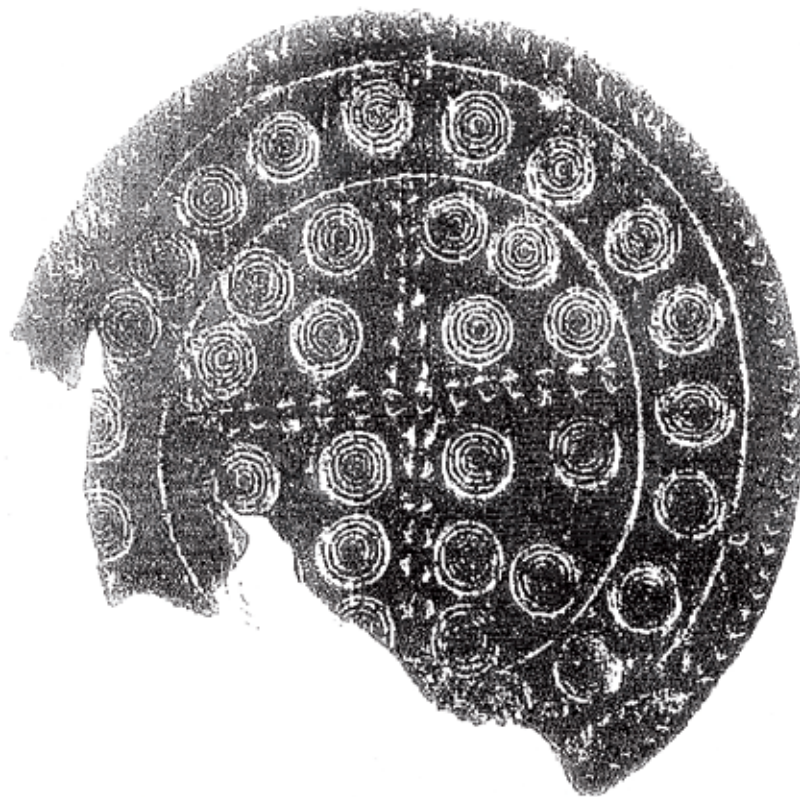


Fig. 10. Ornmented bowl. Manika (after *Davis 1992*)