

# Troy, Baden Culture and Corded Ware – Correlations in the Balkan-Carpathian Region at the Turn of the 4<sup>th</sup> Millennium BC

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**Abstract:** The 4<sup>th</sup> millennium BC in many ways is a time of change in southeastern Europe. After the discontinuation of tell-settlements in the Carpathian Basin and the eastern Balkan area one can see the formation of archaeologically less detectable settlement types nearly across the entire region. This may be interpreted as a reflection of a changing economy. Simultaneously, burial rites show a tradition whose roots lie as far back as the 5<sup>th</sup> millennium BC. Against the background of the changing settlement pattern, the transfer of technical innovations over wide areas of Europe is also noticeable – such as the use of the wheel and wagon, as well as a generally increased use of animal labour. Compared to the 5<sup>th</sup> millennium BC we find a significant decline in metal production, although in this period metal technology is beginning to spread over wide areas of Europe for the first time. This indicates that southeastern Europe lost its quasi-monopoly leadership in the production and use of metals. At the end of the 4<sup>th</sup> millennium, interrelated cultural groups emerge between the Carpathians and the northern Aegean Sea that can be described as Europe's first Early Bronze Age culture. On the basis of new radiocarbon dates from a late Baden settlement in the west of present-day Romania, the interrelations between the late Copper Age in the Carpathian Basin, the appearance of the Early Bronze Age in the Aegean and the Final Neolithic in central Europe will be discussed.

**Keywords:** Balkan-Carpathian region, Final Neolithic, Early Bronze Age, Baden Culture, Corded Ware

The conceptualisation that Troy's ascension as a fortified city occurred parallel to the expansion of Corded Ware in the northeast of central Europe is quite recent indeed.<sup>2</sup> The chronometric dating revolution, facilitated by calibrated radiocarbon dating, made this acknowledgment possible. The links between the Aegean Early Bronze Age and the Corded Ware phenomenon remain unclear; this is due to the lack of finds from intermediary regions that would *directly* connect the two occurrences. Chronologically, the 'Baden' phenomenon occurs before Corded Ware and the commencement of the Early Bronze Age in the Aegean;<sup>3</sup> geographically, it is located between the two regions. In 1963, Nándor Kalicz attempted to create a direct relationship between the two areas.<sup>4</sup> A short time after, calibrated radiocarbon dates revealed that Baden Culture could not possibly be dated later than the Early Bronze Age in the Aegean but should be dated significantly earlier.<sup>5</sup> The thesis that the Baden phenomenon emerged from the migration of populations from northwestern Anatolia<sup>6</sup> was thus fundamentally refuted. This resulted in a flurry of research activity, which was aimed at elaborating an independent development for northwestern Anatolia and the Balkan-Carpathian region. On the basis of the latest findings, it is now time for a renewed discussion concerning these relationships.

A small, 15m<sup>2</sup>-trench at Foeni-Gaz in the westernmost region of present-day Romania appeared, at first glance, to hold only unremarkable finds dating to the transition between the 4<sup>th</sup> and

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<sup>2</sup> Korfmann – Kromer 1993; Furholt 2003; Kromer et al. 2003.

<sup>3</sup> Stadler et al. 2001.

<sup>4</sup> Kalicz 1963.

<sup>5</sup> Neustupný 1973; Němejcová-Pavúková 1973; Němejcová-Pavúková 1974; Maran 1998; Sherratt 2003.

<sup>6</sup> Kalicz 1963, 81–87.

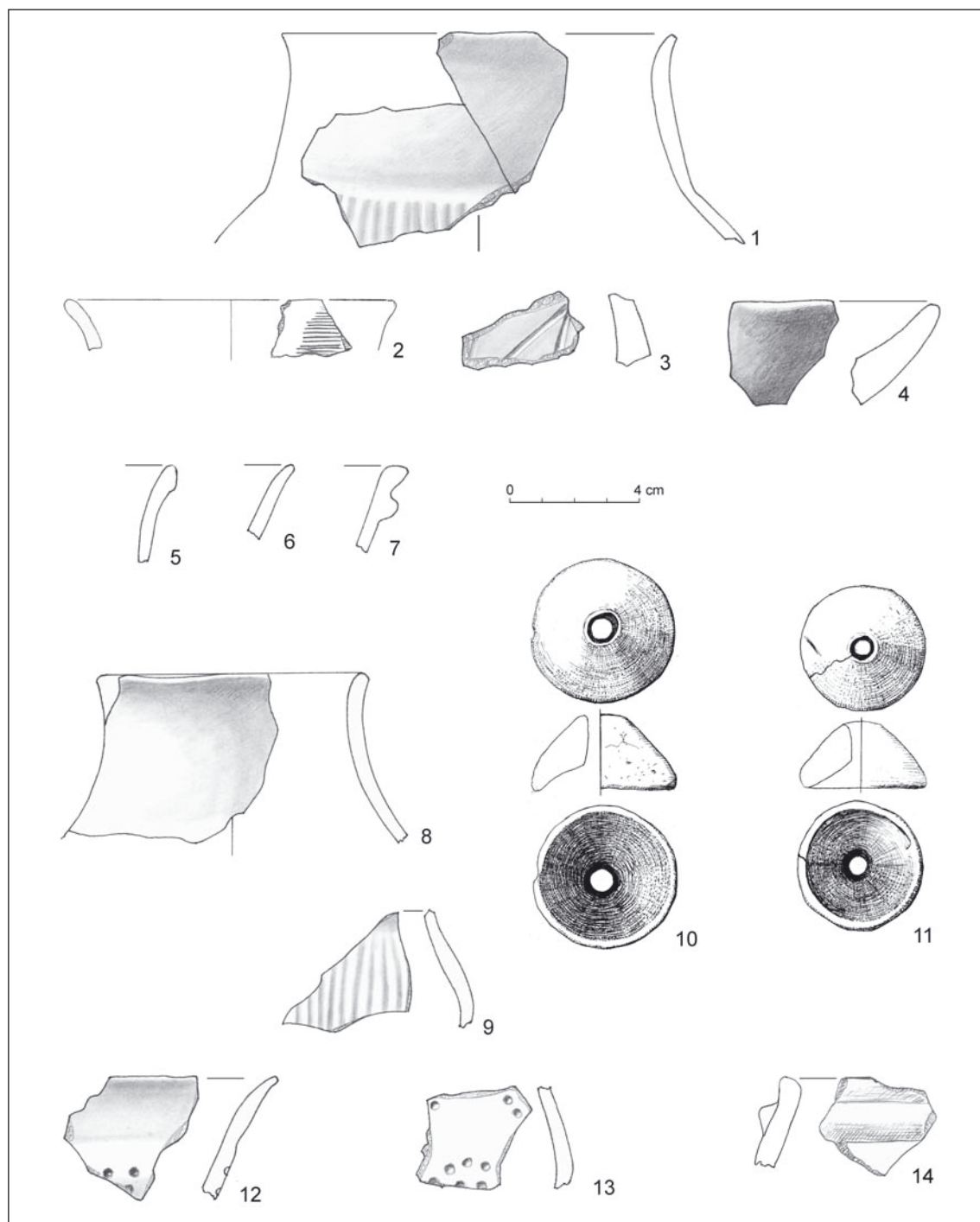


Fig. 1 Late Baden/Kostolac ceramic finds from features 3–5 in Foeni-Gaz, Romanian Banat.

3<sup>rd</sup> millennium BC. However, after careful evaluation, it is clear that this excavation sheds new light on the cultural relationships between northwestern Anatolia and the Carpathian Basin.<sup>7</sup>

<sup>7</sup> Krauß – Ciobotaru 2014.

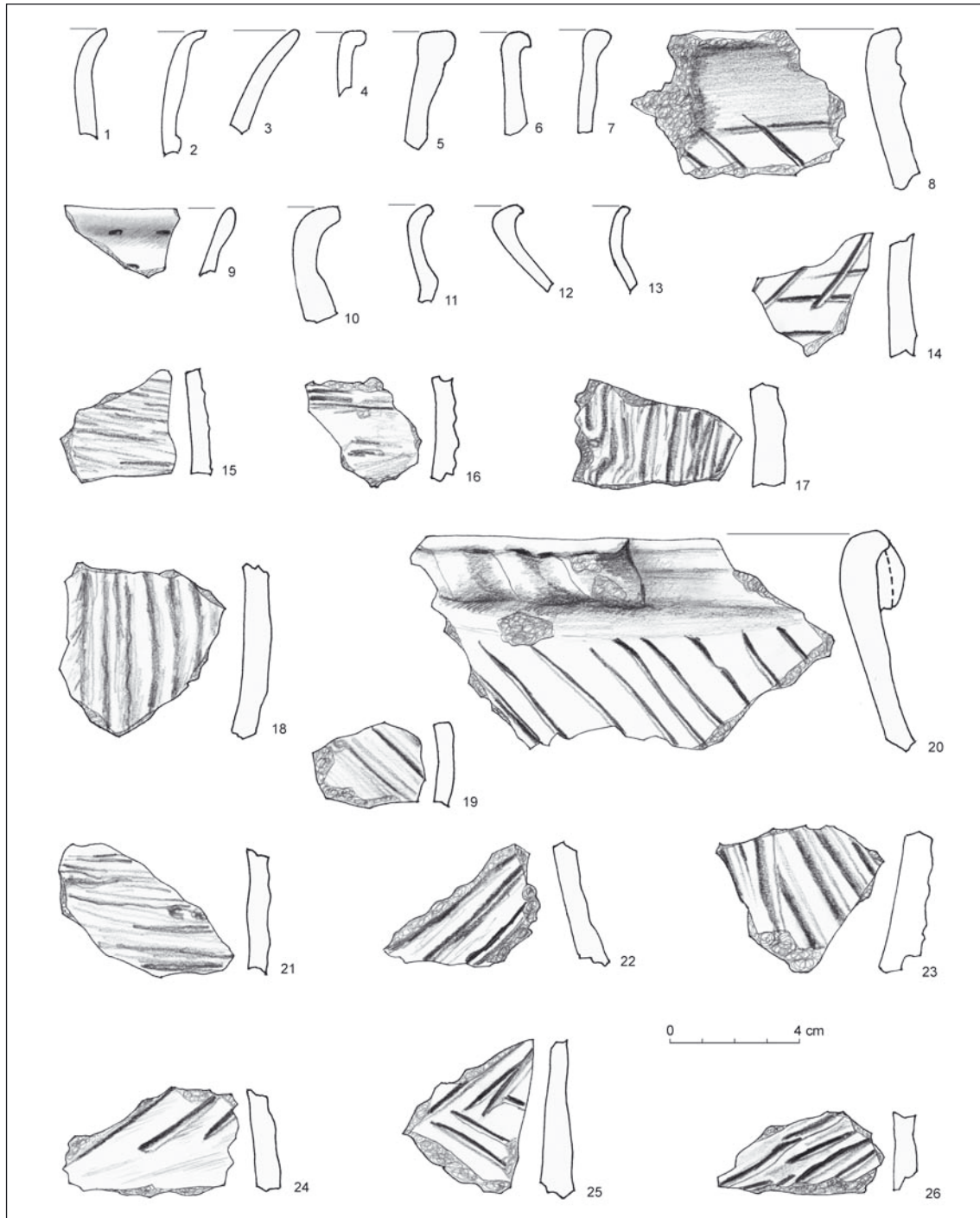


Fig. 2 Late Baden/Kostolac ceramic finds from features 3–5 in Foeni-Gaz, Romanian Banat.

Foeni lies in western Romania, between Timiș and the now canalised Bega River, approximately 45km southwest of Timișoara. In August 2009 the University of Tübingen, in cooperation with the Museum of Banat in Timișoara, carried out an archaeological survey just northwest of the locality adjacent to a modern gas plant (stația de gaz). In a small area, a test trench revealed a complex find-situation. A habitation feature with material from the Baden Culture in its later variant, Kostolac, is of particular relevance to the topic of this volume. The feature is affected by ground intrusions, a roughly 5m-deep well shaft, beginning at the Early Bronze

Age level.<sup>8</sup> The well was ultimately filled in with material from the advanced Early Bronze Age of the Nagyrév Culture.<sup>9</sup>

Among the most significant pottery fragments from the Baden/Kostolac-habitation features 3–5 (Figs. 1–2) were several ceramic sherds with fluting. Other fragments show characteristic indentation- and scratch-ornamentation. Additionally, there are two conical spindle whorls, which also find their best parallels in the context of the Baden Culture. A decorative combination of indentation- and scratch-ornamentation is also seen on a fully-reconstructed large vessel, which can be grouped with an entire series of vessels from the Baden Culture (Fig. 3). In light of the clear typological parallels, <sup>14</sup>C-measurements on associated animal bones were quite surprising. The series consists of four AMS-dates from three cattle bones and one sheep bone, dating to the 28<sup>th</sup> to 26<sup>th</sup> centuries BC.

In the context of conventional dates for the Baden Culture, the dating of the habitation site at Foeni-Gaz is very late. The dendrochronological dating of Baden-Culture finds from Arbon-Bleiche 3 in the first half of the 34<sup>th</sup> century<sup>10</sup> pertains only to the Boleráz horizon from the *beginning* of the Baden development. The length of the ‘Baden’ phenomenon, particularly its *end*, has yet to be determined. Without overestimating the data from Foeni-Gaz, a comparison with other equally late-positioned, comparable finds reveals that dating the end of the Baden Culture to approximately 3000 calBC<sup>11</sup> can no longer be upheld.<sup>12</sup> In fact, it becomes apparent that the classical Baden horizon (Ossarn) extends into the 29<sup>th</sup> century. Accordingly, the late phase of Baden Culture in its southern variant Kostolac, and in its northern counterpart, the Bošáca variant, must date relatively later.<sup>13</sup> Thus, in the northern Carpathian Basin region, a temporal parallelism between late Baden Culture and the beginning of Corded Ware ensued.

There are now multiple data series from the northern region of the Carpathian Basin which, similar to the data from Foeni-Gaz, may be a continuation of the late variants of Baden Culture into the 26<sup>th</sup> century (Tab. 1).

The settlement of Bronocice, at the northern edge of the Beskids,<sup>14</sup> is considered the northernmost location and has a dated find with characteristic late Baden features. The Baden settlement there succeeds older layers from the Funnel Beaker Culture and begins at approximately 3200 calBC (layer IV). For the end of the Baden settlement in Bronocice (layer V), there exists a closed series of seven <sup>14</sup>C-dates, although admittedly, with quite a broad standard deviation of  $\pm 70$  to  $\pm 140$  yrs. Given the stratigraphic location of the dates within the series, however, the end can be narrowed down to the centuries between 2800–2400 calBC.<sup>15</sup> This late onset of the end of Baden is confirmed by a new data set from Balatonőszöd-Temetői dűlő.<sup>16</sup> Accordingly the *early* classical Baden begins around 3200 calBC and ends around 2900 calBC, roughly corresponding to the range proposed by Stadler et al.<sup>17</sup> of 3360–2930 calBC for the *entire* classical Baden. The new Hungarian dates, however, indicate a commencement at approx. 2900 calBC for the *later* development of classical Baden, which, after considering just the 1 $\sigma$ -intervals, extends to around 2690 calBC.<sup>18</sup> The 2 $\sigma$ -interval implies a date after 2600 calBC for the end of Baden. This longer duration for the Baden pottery style is also confirmed by a series of data from the burial site at Budakalász.<sup>19</sup> Con-

<sup>8</sup> Krauß – Ciobotaru 2014, figs. 8–9.

<sup>9</sup> Krauß – Ciobotaru 2014, pls. 5–26.

<sup>10</sup> De Capitani et al. 2002, 209–216.

<sup>11</sup> Cf. Maran 1998, 502; Schier 2010, 33.

<sup>12</sup> As already stated by Forenbaher 1993, 246–247; Schwenger 2005, 187–188.

<sup>13</sup> Cf. Siklósi 2009, 462–465.

<sup>14</sup> Kruk – Milisauskas 1990.

<sup>15</sup> Kruk – Milisauskas 1990, 223–227.

<sup>16</sup> Horváth et al. 2008.

<sup>17</sup> Stadler et al. 2001.

<sup>18</sup> Horváth et al. 2008, fig. 4.

<sup>19</sup> Bondár – Raczky 2009.

sequently, the older graves with proto-Boleráz- and Boleráz-inventories belong with  $2\sigma$ -intervals, within the 3640–3370 calBC time span. Graves with grave goods from classical Baden Culture chronologically fall with an interval of 3350–2880 calBC.<sup>20</sup> Significantly, late Baden – or Kostolac – finds do not appear in Budakalász. Corresponding to the data from Balatonőszöd-Temetői dűlő, and also from Foeni-Gaz, the late period appears to begin in the 29<sup>th</sup> century and ends by the 27<sup>th</sup> or perhaps the 26<sup>th</sup> century BC. As such, the ‘Baden phenomenon’, exists parallel with late Horgen, Cham and late Bernburg, as well as with the Globular Amphora Culture and the first appearance of Corded Ware. Indeed, the succession of Baden and Corded Ware has been determined for the area of southwestern Germany and Switzerland.<sup>21</sup> This may, however, be related to the fact that the later groups from the Baden Culture were not more widespread in the west.<sup>22,23,24</sup>



Fig. 3 Late Baden/Kostolac amphora from Foeni-Gaz, Romanian Banat; height 28.8cm.

<sup>20</sup> Siklósi 2009, 462–465.

<sup>21</sup> Maran 1998, 501–502.

<sup>22</sup> Krauß – Ciobotaru 2014.

<sup>23</sup> Kruk – Milisauskas 1990.

<sup>24</sup> Horváth et al. 2008.

Site/Reference	Lab-Code	Context	Material (species)	<sup>14</sup> C-Age [BP]	<sup>13</sup> C	Phase	
					[‰PDB]		
<b>Foeni-Gaz</b> <sup>22</sup>	1	Hd-29516	Feature 5	bone (bos)	4017 ± 48	-21,2	Bad./Kostolac
	2	MAMS-10893b	Feature 3	bone (bos)	4126 ± 26	-27,2	Bad./Kostolac
	3	MAMS-10893a	Feature 3	bone (bos)	4133 ± 25	-20,2	Bad./Kostolac
	4	MAMS-11203	Feature 3	bone (ovis)	4214 ± 27	-17,3	Bad./Kostolac
<b>Bronocice</b> <sup>23</sup>	1	DIC-1792	3-B4	charcoal	4080 ± 110	n.d.	V (Baden)
	2	DIC-1740	10-B5	charcoal	4080 ± 65	n.d.	V (Baden)
	3	DIC-1795	4-B3	charcoal	4090 ± 140	n.d.	V (Baden)
	4	DIC-979	8-B7	charcoal	4200 ± 60	n.d.	V (Baden)
	5	DIC-978	1-A5	charcoal	4250 ± 115	n.d.	V (Baden)
	6	DIC-1794	6-B8	charcoal	4260 ± 70	n.d.	V (Baden)
	7	DIC-543	2-B2	charcoal	4320 ± 130	n.d.	V (Baden)
	8	DIC-361	39-B1	charcoal	4240 ± 115	n.d.	IV/V (Baden)
	9	DIC-977	1-B8	charcoal	4320 ± 55	n.d.	IV (Baden)
	10	DIC-1736	56-A1	charcoal	4330 ± 60	n.d.	IV (Baden)
	11	DIC-1797	6-B2	charcoal	4340 ± 70	n.d.	IV (Baden)
	12	DIC-1739	95-B1	charcoal	4340 ± 75	n.d.	IV (Baden)
	13	DIC-541	54-B1	charcoal	4440 ± 80	n.d.	IV (Baden)
	14	DIC-717	29-A3	charcoal	4440 ± 80	n.d.	IV (Baden)
<b>Balatonőszöd-Temetői dűlő</b> <sup>24</sup>	1	Deb-13381	pit 2689	animal bone	4110 ± 50	-19,3	EC-Baden
	2	Deb-13389	grave 37, pit 1489	human bone	4200 ± 35	-19,2	EC-Baden
	3	Deb-13245	grave 50, pit 2019	human bone	4220 ± 50	-19,7	EC-Baden
	4	Deb-13387	pit 426	charcoal	4310 ± 50	-24,5	EC-Baden
	5	Deb-13386	pit 2596	animal bone	4330 ± 35	-19,4	EC-Baden
	6	Deb-13382	pits 1072-1096	animal bone	4360 ± 45	-20,2	EC-Baden
	7	Deb-13292	grave 67, pit 426	human bone	4380 ± 45	-19,7	EC-Baden
	8	Deb-13374	pit 1036	animal bone	4390 ± 60	-19,9	EC-Baden
	9	Deb-13244	pit 203	bone (bos)	4440 ± 60	-20,3	Boleráz
	10	Deb-13412	pit 1612	bone (canis)	4440 ± 70	-19,9	Boleráz
	11	Deb-13286	grave 79, pit 2635	human bone	4440 ± 45	-19,4	Boleráz
	12	Deb-13411	pit 2060	animal bone	4445 ± 45	-19,5	Boleráz
	13	Deb-13395	grave 74, pit 2614	animal bone	4460 ± 50	-20,3	Boleráz
	14	Deb-13379	well 1, pit 1099	human bone	4480 ± 70	-20,6	Boleráz
	15	Deb-13277	grave 23, pit 426	n.d.	4520 ± 60	-19,9	Boleráz
	16	Deb-13291	pits 2327-2346	animal bone	4550 ± 80	-20,4	Boleráz
	17	Deb-13398	pit 2581	animal bone	4680 ± 45	-20,9	Boleráz
<b>Budakalász</b> <sup>1</sup>	1	VERA-3544	grave 158	human bone	4170 ± 40	-22,6	Boleráz/Baden
	2	VERA-3545	grave 174	human bone	4215 ± 40	-21,7	Boleráz/Baden
	3	VERA-3543	grave 75	human bone	4295 ± 40	-19,8	Boleráz/Baden
	4	VERA-3549	grave 378	human bone	4340 ± 35	-19,6	Boleráz/Baden
	5	VERA-4376	grave 19	human bone	4370 ± 35	-20,1	Boleráz/Baden
	6	VERA-3547	grave 182b	human bone	4375 ± 35	-18,7	Boleráz/Baden
	7	VERA-4381	grave 383	human bone	4400 ± 40	-20,5	Boleráz/Baden
	8	VERA-4375	grave 13a	human bone	4420 ± 35	-21,6	Boleráz/Baden
	9	VERA-4379	grave 252	human bone	4440 ± 40	-23,1	Boleráz/Baden
	10	VERA-3548	grave 182c	human bone	4445 ± 35	-21,5	Boleráz/Baden
	11	VERA-3546	grave 182a	human bone	4455 ± 30	-20,8	Boleráz/Baden
	12	VERA-4377	grave 142b	human bone	4460 ± 40	-22,3	Boleráz/Baden
	13	VERA-4378	grave 230	human bone	4465 ± 40	-22,9	Boleráz/Baden
	14	VERA-4382	grave 403	human bone	4510 ± 35	-21,0	Boleráz/Baden

Tab. 1 New radiocarbon dates (and older ones from Bronocice) for the Baden-Culture in the Carpathian basin (EC=Early Classical).

In the northwestern Carpathian Basin region, in particular, signs pointing to a symbiotic relationship between Late Baden and Corded Ware can be found. For instance, the older find horizon of the Moravian Bošáca group is still clearly in the Baden tradition.<sup>25</sup> Typological correlations are found in the fluting and in the composition of the borders created by pin-pricks that ornate the vessels in the Baden tradition.<sup>26</sup> A boundary line, between the late Baden groups of the Carpathian Basin and the early distribution area of Corded Ware in Moravia and eastern Austria, remains, in any case, difficult to determine. Of notable importance, several early beakers, from Franzhausen-Mitte and Inzersdorf in the Traisen Valley, for instance, also show an *impresso* motif in the Baden tradition rather than the later, customary cording.<sup>27</sup> In the northern Carpathian region, it is the Chłopice-Veselé group, which follows Bošáca that first shows clear relations to the Corded Ware.<sup>28</sup>

With the expansion of the Chłopice-Veselé group throughout the Eastern Moravian-Western Slovakian region to the Danube,<sup>29</sup> the Corded-Ware phenomenon achieved its southernmost point within the Carpathian Basin after 2600 calBC.<sup>30</sup> Only after the encroachment of the Bell-Beaker phenomenon in the Carpathian Basin, in the 26<sup>th</sup>/25<sup>th</sup> century, do Baden pottery elements become undetectable within this 'refuge'. In its place, a new element appears which coexists alongside the Corded Ware, Globular Amphora and late Vučedol pottery. This new addition is subsumed under the collective terms Makó/Kosihý-Čaka<sup>31</sup> and Somogyvár-Vinkovci.<sup>32</sup>

While the framework for the end of Baden in the Carpathian Region in the 27<sup>th</sup>, or even the 26<sup>th</sup> century is significantly important, the historically much-discussed research topic of Baden Culture's relationship to the south is also of great interest.<sup>33</sup> In retrospect, a clear parallel emerges between its youngest occurrence and the older settlement layers of Troy, specifically with phases Troy Ia to If (Fig. 4). The development of Baden Culture begins, indeed, a little earlier, but subsequently runs parallel to the settlement activity of the entire Early Bronze Age settlement of Ezero in the Thracian plain.<sup>34</sup> This phenomenon was determined 30 years ago by Němejcová-Pavúková on the basis of typological comparisons and <sup>14</sup>C-data available at the time.<sup>35</sup> Within the Ezero sequence, the 29<sup>th</sup> and 28<sup>th</sup> centuries correspond to the Mihalič phase.<sup>36</sup> In the lower reaches of the Danube, the last offshoots of the Copper-Age tell-cultures in the Balkan region end with Cernavodă III. Whereas isolated tell-settlements from the 4<sup>th</sup> millennium have been verified on the Romanian bank of the Danube (e.g. Cernavodă itself, as well as Hırşova and Gumelnița), south of the river, in Bulgaria, only single-phase settlements (e.g. Pevec, Hotnica-Vodopada, Galatin and many others) have been verified. Parallel to the Baden Culture in the middle Danube region, in the southern Carpathian area the Coțofeni Culture developed out of this substrate. The stylistic transitions from Coțofeni to late Baden- and Kostolac-pottery are, indeed, blurred here as well.<sup>37</sup> Moreover, with regards to burial customs and settlements, Coțofeni appears as heterogeneous as the Baden phenomenon. The characteristic burial mounds first show up in the western Black Sea region and along the lower Danube

<sup>25</sup> Pavelčík 1981.

<sup>26</sup> Pavelčík 1981, pls. I–II.

<sup>27</sup> Neugebauer – Neugebauer 1992, figs. 1.3; 6.9.

<sup>28</sup> Machnik 1981; Pavúk 1981.

<sup>29</sup> Pavúk 1981, fig. 5.

<sup>30</sup> Furholt 2003, 136.

<sup>31</sup> Bertemes – Heyd 2002.

<sup>32</sup> Kalicz-Schreiber – Kalicz 1998.

<sup>33</sup> Cf. Kalicz 1963; Neustupný 1973; Němejcová-Pavúková 1973; Němejcová-Pavúková 1974; Maran 1998; Sherratt 2003.

<sup>34</sup> Georgiev et al. 1979.

<sup>35</sup> Němejcová-Pavúková 1981, 268–282; figs. 16–17.

<sup>36</sup> Bojadžiev 1998, 357–358.

<sup>37</sup> Roman – Némethi 1978, 49–55.

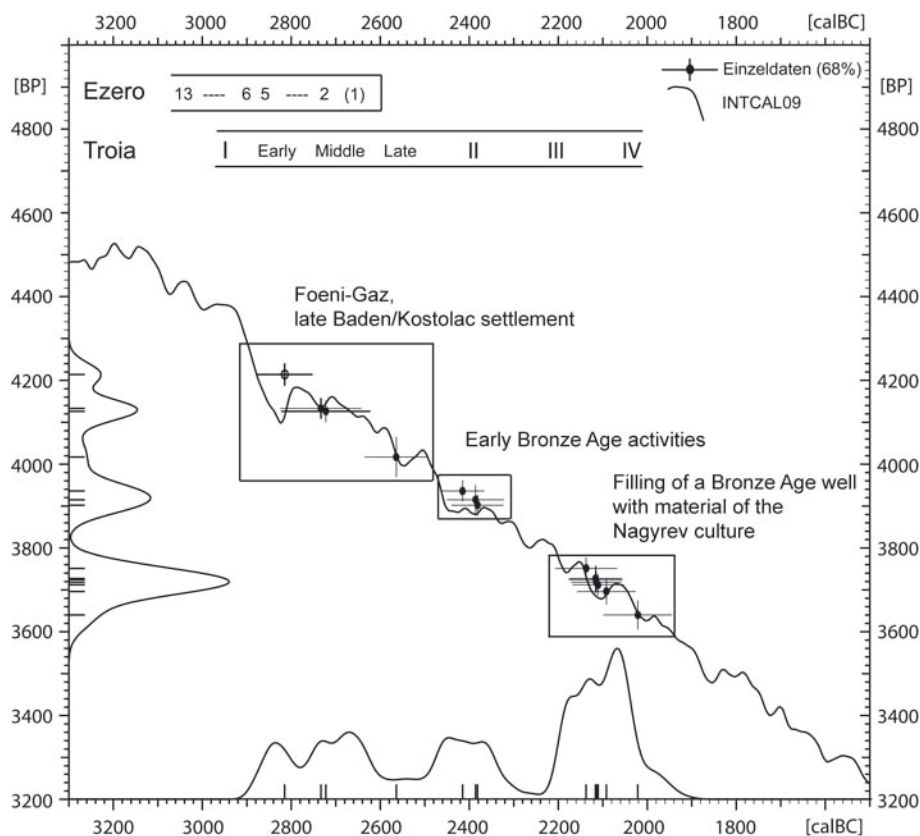


Fig. 4 Calibration of radiocarbon dates from Foeni-Gaz on IntCal 09. The Ezero and Troy sequences are depicted above (graph: Bernhard Weninger, Cologne [according to Krauß – Ciobotaru 2014]).

and expand into the Tisza region beginning with the Pit Grave Culture, whose influence moved westward from the north Pontic steppe zone.<sup>38</sup>

In the second half of the 4<sup>th</sup> millennium, in the central Balkan region, the north-south flowing river systems in particular, emerged as important communication zones between the north Aegean and the Carpathian Basin. The spread of Bratislava-type dishes were evaluated as evidence associated with this connection by Němejcová-Pavúková<sup>39</sup> and later by Maran.<sup>40</sup> Likewise, Maran has also suggests a general relationship between the north Aegean and the Carpathian region based on the fluted pottery.<sup>41</sup> Fluted pottery appears along the lower Danube with the *Scheibenhenkel*-horizon in the 4<sup>th</sup> millennium<sup>42</sup> – during the so-called transition period, according to Bulgarian-Romanian terminology. We see here, however, a clear border between an older horizon in the tradition of the 5<sup>th</sup> millennium, with horizontally-fluted vessels and isolated incidents of graphite ornamentation, and sites that were chronologically, but also typologically related to the Baden Culture of the second half of the 4<sup>th</sup> millennium. The first chronological unit was named by Ivan Vajsov ‘Post-Eneolithic’, the second ‘Proto-Bronze Age’ (Fig. 5).<sup>43</sup> The finds

<sup>38</sup> Kalicz 1989, 126–131.

<sup>39</sup> Němejcová-Pavúková 1981, figs. 12, 14.

<sup>40</sup> Maran 1998, figs. 5–6.

<sup>41</sup> Maran 1998, 503–508.

<sup>42</sup> Cf. Georgieva 1993.

<sup>43</sup> Vajsov 2002.



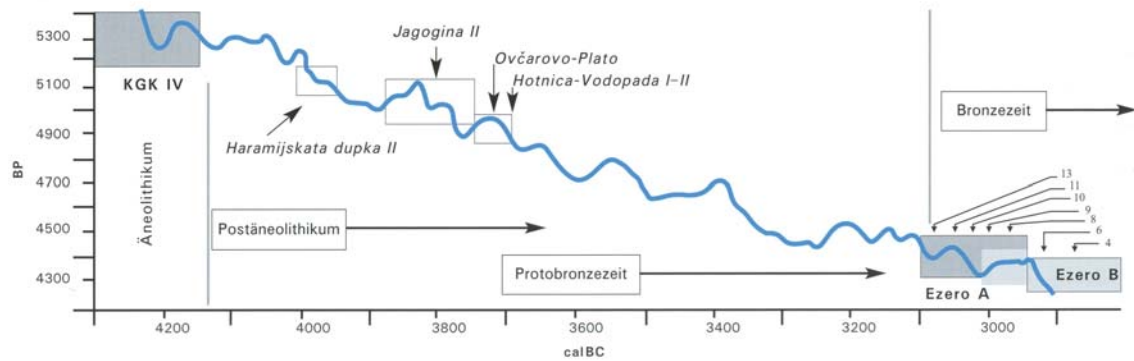


Fig. 5 Chronological scheme for the so called transition period from Eneolithic to Early Bronze Age in Bulgaria (Vajsov 2002).

from Hotnica-Vodopada,<sup>44</sup> Teliš IV<sup>45</sup> and Koprivec,<sup>46</sup> as well as Cernavodă I and III,<sup>47</sup> belong to the first chronological unit. There are also some findings from Drama-Merdžumekja in Thrace, which are connected with Cernavodă III.<sup>48</sup> The finds previously published by Maran<sup>49</sup> from the Kovačevo and Dābene settlements belong to the second period ('Proto-Bronze Age' according to Vajsov), which is related to Baden Culture. The materials from Vaksevo VII,<sup>50</sup> Galatin-Čukata,<sup>51</sup> Sālcuța IV, as well as some of the materials from Ostrovul Corbului and the Peștera Hoților at Bāile Herculane,<sup>52</sup> can be added to this group. The geographic distribution of the sites suggests a network of relations between the Baden fluted pottery of the Carpathian Basin and the sites with such pottery collated by Maran in the North Aegean. The fluted fragments from Foeni-Gaz (Figs. 1.1; 10) can be coalesced with these other finds, to buttress this view.

Regarding the chronological relationships across the Balkans as far as Sitagroi, and thereby to material from the north Aegean, we can identify clear links between the Early Bronze Age materials from Junacite (EBA III following Bulgarian terminology), phase II of the Tei-Culture in Muntenia,<sup>53</sup> and Sitagroi Vb. These assemblages all feature cups with pointed bases, *Kantharoi*, and conical cups.<sup>54</sup> The links between Muntenia and Thrace via the northern Bulgarian Danube lowlands have already been discussed elsewhere.<sup>55</sup> A parallelisation of Sitagroi Va with classical Vučedol Culture is already established, particularly on the basis of bowls with incised decoration around the rim,<sup>56</sup> thus providing evidence for relations between the Slavonic-Syrmian region and Greek Macedonia. In light of the persistence and longer duration of Baden pottery traditions in the Carpathian Basin, and in line with earlier conclusions by Fohrenbacher<sup>57</sup> and Schwenzer,<sup>58</sup> we also now posit a correlation between Sitagroi IV and *Late* – though not already

<sup>44</sup> Ilčeva 2009, pls. 23–51.

<sup>45</sup> Gergov 1992, figs. 6–7; Stefanova 2002.

<sup>46</sup> Nikolova 2001, fig. 1.

<sup>47</sup> Roman 1977.

<sup>48</sup> Lichardus – Iliev 2001, pls. 12–13.

<sup>49</sup> Maran 1998, fig. 3.

<sup>50</sup> Čochadžiev 2001, figs. 83–87.

<sup>51</sup> Georgieva 1987, fig. 2.

<sup>52</sup> Roman 1971, figs. 3–5, 7–8, 29–32.

<sup>53</sup> Cf. Leachu 1966, fig. 19; Nikolova 1999, fig. 4.1–2.

<sup>54</sup> Sherratt 1986, fig. 13.20, 24, 27.3.

<sup>55</sup> Krauß 2006.

<sup>56</sup> Maran 1998, 340–343.

<sup>57</sup> Fohrenbacher 1993, 46.

<sup>58</sup> Schwenzer 2005, 188.



Fig. 6 SE-Europe at the turn from the 4<sup>th</sup> to the 3<sup>rd</sup> millenium BC. Sites of Late Baden and Kostolac cultures (after Tasić 1979, 241, map 5; Horváth et al. 2008; Furholt 2009, 203 with additions). Hatched areas depict the region with burial mounds (after Kalicz 1989, fig. 3). 1. Foeni-Gaz; 2. Szigetmonostor; 3. Szentendere; 4. Békásmegy-er; 5. Budapest-Tabán; 6. Szigetsép-Tangazdaság; 7. Szentés; 8. Hódmezővásárhely; 9. Deszk; 10. Balatonőszöd; 11. Pécs-Vasas; 12. Bogojevo; 13. Odžaci; 14. Sarvaš; 15. Cerić; 16. Vučedol; 17. Petrovaradin; 18. Vrdnik-Pećine; 19. Ruma; 20. Gomolava; 21. Vis kod Dervente; 22. Pivnica kod Odžaka; 23. Belegiš-Šančine; 24. Zemun; 25. Belgrad-Kalemegdan; 26. Dobanovci-Ciglana; 27. Šuplja stena-Avala; 28. Kostolac; 29. Korićane; 30. Jelenac-Aleksinac; 31. Bubanj; 32. Hisar-Suva Reka.

with *Classical* – Baden.<sup>59</sup> Following the reevaluation of presently available <sup>14</sup>C-ages, we know that Sitagroi IV can be narrowed down to the centuries between 3550 and 2650 calBC<sup>60</sup> or more precisely to 3110–2650 calBC.<sup>61</sup> Therefore, data for Sitagroi IV tend to be slightly older than dates from Foeni-Gaz. The data from the Late Baden/Kostolac settlement feature, between 2800

<sup>59</sup> Cf. Parzinger 1993, 267; Maran 1998, 344–345.

<sup>60</sup> Stadler et al. 2001; Wild et al. 2001.

<sup>61</sup> Schwenzer 2005, 186.

and 2600 calBC, indicate a correlation with Sitagroi Va. Consequently, an even longer duration for Late Baden, spanning into Sitagroi IV–Va must be presumed. A synthesis of the relationships discussed here, in conjunction with the available data, advances the idea that Late Baden material synchronises with Vučedol, Mihalič, Sitagroi Va and Troy I (Fig. 6).

Notably, the search for typological equivalents of our material within this horizon was halted due to methodological limitations. Nevertheless, large bulbous vessels with lateral, short strap handles (*Bandhenkel*), which are characteristic for Sitagroi Va,<sup>62</sup> seem comparable to the large amphorae from Foeni-Gaz (Fig. 3). Furthermore, a similar pricked decorative motif, found on various fragments of this vessel, is also encountered in Ezero IV (Mihalič phase).<sup>63</sup> However, convincing parallels indicating a regular exchange of goods and ideas between the Aegean north coast, the Balkans and the Carpathian Basin, are not so readily identifiable. Instead, archaeological material assemblages are more indicative of a pronounced regionalisation. This insight might explain why chronological relationships between the aforementioned cultural spheres were not identified prior to the more intensive study of calibrated radiocarbon ages.

In conclusion, I would like to emphasise that a direct typological comparison between the late occurrence of Baden Culture and the Aegean-Thracian Early Bronze Age remains problematic. The connection postulated by Kálicz in the 1960s, between early classical Baden Culture and Troy II and III by way of anthropomorphic vessels, cannot be established chronologically. This occurrence may be an incident of coincidental and converging appearances, because layers Troy II and III date between 2500–2180 calBC,<sup>64</sup> and the Baden face urns remain limited to the final years of the 4<sup>th</sup> millennium. Nevertheless, the <sup>14</sup>C-data indicate that the entire Ezero Culture in Thrace can be considered parallel to the Baden phenomenon. Furthermore, the beginning of the settlement of Troy I also overlaps with the end of Baden Culture – and does so over a period of at least 300 years, specifically, from the 30<sup>th</sup> – 27<sup>th</sup> centuries BC. This findings should be reason enough to restore, to a certain extent, Nándor Kálicz's standing and to reconsider the relationship between the Aegean Early Bronze Age and the Late Copper Age in the Carpathian Basin.

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<sup>62</sup> Sherratt 1986, fig. 13.18.2, 19.

<sup>63</sup> Georgiev et al. 1979, fig. 156.

<sup>64</sup> Korfmann – Kromer 1993; Kromer et al. 2003.

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