

ENVIRONMENTAL  
ARCHAEOLOGY  
IN TRANSDANUBIA



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ARCHAEOLOGICA  
HUNGARICA

# Settlement patterns in the Hahót Valley

## Copper and Bronze Age settlement patterns in the Hahót Valley

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### Introduction: The study area

Systematic archaeological work in modern County Zala began with the archaeological field surveys in the county's north-eastern part in the 1960s.<sup>1</sup> The archaeological mapping of the county's other parts began with the field surveys conducted by Jolán Horváth, László Horváth, Róbert Müller, László Vándor and Nándor Kalicz,<sup>2</sup> and a series of smaller excavations.<sup>3</sup> The rescue excavations preceding the rehabilitation of the Little Balaton region from the 1980s gave a fresh impetus to archaeological research and opened new perspectives as a result of large-scale excavations, which yielded a wealth of new evidence for all archaeological periods.<sup>4</sup> The systematic archaeological mapping of the region continued with the so-called micro-region project in the Hahót Basin between 1986 and 1994. These investigations too enriched our knowledge of the region's archaeology with sites from all periods – about one-third of these sites was excavated to a greater or smaller extent.<sup>5</sup> Parallel to the Hahót micro-region project, András L. Horváth and Katalin H. Simon conducted field surveys and excavations in the county's northern parts, in the areas supervised by the Zalaegerszeg museum.<sup>6</sup> The systematic survey of the Kerka Valley and the trial excavation of a few selected sites was begun in 1995. The archaeological excavations preceding major construction projects (shopping centres, motorways, bypass roads) from the late 1990s too provided fresh insights into the county's settlement history.

<sup>1</sup> This area was at the time part of County Veszprém, but it later again became part of County Zala. For the results of the topographic survey, cp. MRT 1.

<sup>2</sup> *Horváth, J.*: Az Alsó-Zalavölgy és környéke őskori településtörténete [Prehistoric settlement patterns in the Lower Zala Valley and its broader areas]. University thesis. Budapest 1970; *Müller* (1971); *Vándor, L.*: A Mura-völgy magyarországi szakaszának története [The history of the Hungarian section of the Mura Valley]. University thesis. Budapest 1972; *Horváth* (1994a).

<sup>3</sup> *Kalicz, N.*: Letenye–Szentkeresztomb. Ausgrabung und Bibliographie. *MittArchInst* 1 (1970) 108–110; *idem*: Nagyzánizsa–Sánc. Ausgrabung und Bibliographie. *MittArchInst* 6 (1976) 149–150; *idem*: Becsehely. Ausgrabung und Bibliographie. *MittArchInst* 7 (1977) 119–120; *idem*: Becsehely. Ausgrabung und Bibliographie. *MittArchInst* 8–9 (1978–1979) 201–203; *Horváth* (1984).

<sup>4</sup> *Sieben Jahrtausende; Évezredek üzenete.*

<sup>5</sup> *Bánffy* (1995a); *idem* (1995b); *Bondár* (1995a); *idem* (1995b); *Szőke* (1995).

<sup>6</sup> *Horváth–H. Simon* (1997).

As a result of these investigations, we now have abundant evidence about the archaeology of this county, especially regarding the Neolithic and Copper Age.<sup>7</sup> The investigation of the Somogyvár–Vinkovci settlement at Börzönce yielded fresh insights into the Early Bronze Age history of the Hahót region.<sup>8</sup> However, little was known about the period between the Somogyvár–Vinkovci culture and the appearance of the Tumulus culture in the region west of the Little Balaton,<sup>9</sup> similarly to the neighbouring south-eastern and western areas of Slovenia<sup>10</sup> and Styria.<sup>11</sup> The excavations preceding the construction of the M7 and M70 motorways and the Zalaegerszeg bypass road have enriched our knowledge of the peoples of this period.

The variations in the settlement density of County Zala during different archaeological periods can principally be traced to environmental and economic factors and the differences in lifeways. The greater part of the region is currently covered with brown forest soil. The southern shore of Lake Balaton has larger areas of alluvial soil and smaller patches of wind-blown sand.<sup>12</sup> The county is still heavily forested and has many marshy, waterlogged areas. Most streams become temporarily filled with water after heavy rainfalls. Except for Lake Balaton, there are no large open waters or rivers, which would provide a continuous supply of water. This undoubtedly influenced the settlement patterns and the subsistence of the peoples settling in this region.

It would appear that the soil types preferred by various population groups differed from period to period: the earliest agriculturalists chose loessy areas for settlement, avoiding areas with clayey, pebbly soil and higher hills. Possessing more developed cultivation techniques and better tools than the communities of the preceding periods, the Lengyel communities of the Late Neolithic and Early Copper Age tended to settle on hills, from where they could control a larger area and defend their settlements. Most settlements continued to be occupied during the Middle Copper Age. A preference for loessy, sandy soils can be noted again in the Late Copper Age, when few settlements were established in the mountainous regions. The number of settlements declined visibly in the Early Bronze Age, a tendency continuing into the Middle Bronze Age, when a settlement concentration occurred throughout most of Transdanubia: larger central settlements were surrounded by smaller, transient campsites, many of which left but a few traces in the archaeological record (fireplaces, broken vessels). This period is marked by a population growth, which can be explained by the increased carrying capacity of particular regions owing to improved cultivation and stockbreeding practices.

The climate of the Carpathian Basin underwent major changes from the mid-Neolithic: the earlier climate, well suited to agriculture, turned cooler and wetter, leading to changes in the vegetation cover: linden, elm, hazel and oak woods were supplanted by spruce and pine forests,

<sup>7</sup> *Bondár* (1987); *Bánffy, E.*: Übergang des Spätneolithikums und die Kupferzeit im Komitat Zala. *Zalai Múzeum* 2 (1990) 67–70; *Bondár* (1991); *idem* (1995a); *Szőke* (1995) 20–22; *Bánffy* (1995a); *idem* (1995b); *idem* (1998); *idem*: Siedlungsgeschichte Südwesttransdanubiens im Neolithikum und Chalkolithikum. In: *Mensch und Umwelt während des Neolithikums und der Frühbronzezeit in Mitteleuropa*. Hrsg. von A. Lippert, M. Schultz, S. J. Shennan und M. Teschler-Nicola. *Internationale Archäologie* 2, Rahden/Westf. 2001, 171–179.

<sup>8</sup> *Bondár* (1995b).

<sup>9</sup> *Kovács* (1984) 383; *idem* (1994) 119; *Horváth* (1994a) Fig. 11; *idem* (1994b) 219; *Szőke* (1995) 23; *Bánffy* (1998) 12; *Bondár* (1998) 21–23; *Horváth* (2000) 13.

<sup>10</sup> *Šavel, I.*: Prazgodovinske naselbine v Pomurju [Prehistoric settlement in Promurje]. Maribor 1994, 102; *Šavel* (1996) 20.

<sup>11</sup> *Modrijan, W.*: Die kulturelle und chronologische Einordnung des Neo- und Äneolithikums in der Steiermark. *Arheološki Vestnik* 24 (1973) 133–134, 142; *Lippert* (1999) 345, Karte 2, Tab. 2, Tab. 3; *Drescher-Schneider – Wick* (2001) 18–20, 23; *Hebert, B. – Wenedig, R.*: Ergebnisse der Archäologischen Landesaufnahme in der Oststeiermark auf Grundlage der Arbeiten von Kurt Kojalek. In: *Die Drau-, Mur- und Raab-Region*, 41; *Ruttkey, E.*: Das endneolithische Hügelgrab von Neusiedl am See, Burgenland. Zweite Vorlage–Teil I. Die Fazies Neusiedl. In: *Festschrift für Rózsa Kalicz-Schreiber*. *BudRég* 36 (2002) 155, Abb. 6.

<sup>12</sup> *Füleky, Gy.*: A talaj [The soil]. Budapest 1988, Fig. 30.

alongside the expansion of beech. It is generally assumed that these changes led to a shift from arable to pastoral farming, an assumption borne out by the pollen sequence from Pölöske.

The Copper and Early Bronze Age settlement network in the Hahót Basin reflects these environmental changes (deteriorating climate, the human impact on the environment) and, also, how prehistoric communities adapted to these changes. The dense settlement network of the Early and Middle Copper Age disappeared by the Furchenstich period, which is characterised by considerably fewer settlements, a change reflecting the transformation of the environment. Changes in the vegetation cover and soil composition affect human activity – in order to ensure a continuous food supply for survival, prehistoric communities had to adapt to the changed circumstances. The number of settlements in County Zala declined in the Late Copper Age; most settlements lay beside water in the Balaton and Little Balaton region. Although the number of settlements grew again in the Early Bronze Age, most of these were briefly occupied, transient campsites in the vicinity of a larger centre, suggesting changes in crop cultivation practices during the Late Copper Age and a shift to stockbreeding in the Early Bronze Age.

## The Early and Middle Copper Age

Surface finds indicate a rather dense settlement network during the Early Copper Age (late Lengyel culture) in the study area. The gently rolling Zala hills offered suitable settlement locations for the late Lengyel communities. Their settlements lay fairly close to each other in the region, with an abundance of areas suitable for crop cultivation and livestock pasturing. Several late Lengyel sites have been excavated in County Zala; one of the largest among these is the Zalaszentbalázs–Szőlőhegyi mező settlement in the Hahót Basin,<sup>13</sup> lying between the two palaeoenvironmental sampling locations at Pölöske and Pötréte. Two sides of the extensive settlement lying on a low hill were investigated; the pollen samples and the food remains allowed a reconstruction of the plants grown by the occupants and, also, of how food was prepared.<sup>14</sup>

The settlements of the Middle Copper Age Balaton–Lásinja culture can be found almost everywhere in the Little Balaton region, in the Hahót Basin, in the broader Zalaegerszeg area, along the northern shore of Lake Balaton and even in the more distant Kerka Valley. The late Lengyel settlements continued to be occupied, suggesting unchanged subsistence practices. The finds reflect strong cultural impacts from the south and certain elements of the Vinča–Pločnik culture. There is no visible break in the life of the settlements.<sup>15</sup> Large-scale excavations in recent years have increased our knowledge of the settlement patterns of this period. Most of the earlier investigated settlement sites yielded pits only; the extensive areas investigated more recently have brought to light the remains of large houses – e.g. at Zalavár–Basasziget,<sup>16</sup> Kaposvár–Road 61,<sup>17</sup>

<sup>13</sup> Bondár (1995a); Bánffy (1995a).

<sup>14</sup> Gyulai, F.: The plant and food remains from the Copper age settlement at Zalaszentbalázs–Szőlőhegyi mező. *Antaeus* 22 (1995) 145–156.

<sup>15</sup> Somogyi (2000).

<sup>16</sup> M. Virág, Zs.: Vorbericht über die Ergebnisse der Freilegung der kupferzeitlichen Siedlung von Zalavár–Basasziget (Angaben zur Siedlungsstruktur und Wirtschaft der Balaton–Lásinja I-Kultur). *Zalai Múzeum* 2 (1990) 71–77; *idem*: Középső rézkor [Die mittlere Kupferzeit]. In: *Évezredek üzenete*, 22–24, 30–31; *idem*: Settlement historical research in Transdanubia in the first half of the Middle Copper Age. In: *Morgenrot der Kulturen. Frühen Etappen der Menschheitsgeschichte in Mittel- und Südosteuropa. Festschrift für Nándor Kalicz zum 75. Geburtstag*. Hrsg. von E. Jerem und P. Raczky. Budapest 2003, 375–400.

<sup>17</sup> Somogyi (2000); Somogyi, K.: Előzetes jelentés a Kaposvár–61-es út elkerülő szakasz 1. sz. lelőhelyén végzett feltárásról [Preliminary report of the excavation of Site No. 1 situated on the encircling section of Road 61 around Kaposvár]. *SMK* 14 (2000) 245–249.

the Győr area<sup>18</sup> – and the ditches enclosing these settlement. There is now an abundance of data for reconstructing the lifeways of this period.

Considerably less is known about the ensuing period, in spite of the many excavations conducted over extensive areas. The finds do not reflect profound changes during the Furchenstich period. Few sites from this period are known from County Zala and most of these were identified from surface finds collected during field surveys. There are few professionally excavated settlements or burials.<sup>19</sup> The finds (mostly pottery) recovered from a pit of the settlement investigated at Zalabaksa–Zsidótemető in the Kerka Valley recall certain traits of the Balaton–Lasinja culture. Were it not for the decorated pottery fragments, the site could be assigned to the Balaton–Lasinja culture. The wares decorated with a lattice pattern and incised lines, the bowls and pots with a characteristic profile and the vessels with stringhole lugs, however, clearly show that the pit had been part of a Furchenstich settlement. The closed assemblage from the Zalabaksa pit can be definitely assigned to the Furchenstich culture<sup>20</sup> and represents a period which, though bound by many strands to the preceding Balaton–Lasinja period, is characterised by the adoption and integration of a number of new elements.<sup>21</sup> Little is known about the lifeways of the Furchenstich population. Their small, briefly occupied settlements are usually made up of a handful of refuse pits. The pits lying 20–30 m from each other often yield no more than a handful of finds, perhaps owing to the population's simple, pastoralist life-style. Research in other regions has revealed that significant changes occurred towards the end of the Middle Copper Age. The find assemblages of the Furchenstich culture originating from Central Europe – known as the Bajč–Retz–Gajáry and Kevderc–Djerdap complex in neighbouring countries – reflect contact with the western Alpine region. Many contain finds indicating metalworking and trade with other regions. Interestingly enough, the briefly occupied settlements do not provide any evidence for social ranking, which can be assumed from the high number of well crafted metal finds (copper implements and gold articles). The archaeological record reflects the presence of strongly ranked communities in the Carpathian Basin during this period. The start of the accumulation of wealth can be noted; one of the most outstanding finds in this respect is the disc from Csáford.<sup>22</sup> The findspot of the disc was investigated again by Gábor Rezi Kató, but he did not uncover any comparable finds, principally because the site had been destroyed by vine cultivation.<sup>23</sup>

The accumulation of wealth and the general prosperity at the close of the Middle Copper Age is a reflection of improved food production. A new technological innovation, the introduction of wooden ploughs resulted in better harvest yields. Depictions from Northern and Western Europe suggest that wooden ploughs were known and widely used by this time and that domesticated cattle were used as draught animals.<sup>24</sup> Cereal cultivation became more efficient with this innovation, and neither was there a pressing need to clear new tracts of woodland or for relocating settlements from time to time. Prosperity led to social differentiation and the accumulation of wealth, which most often took the form of heavy copper implements and various articles of gold. These

<sup>18</sup> *M. Virág, Zs. – Bondár, M.*: Settlements. In: *Hungarian Archaeology at the Turn of the Millennium*. Ed. by Zs. Visy. Budapest 2003, 128.

<sup>19</sup> *Horváth, L. A. – H. Simon, K.*: Das Neolithikum und Kupferzeit in Südwesttransdanubien. IPH 9. Budapest 2003.

<sup>20</sup> *Bondár, M.*: The Copper Age settlement at Zalabaksa. *Antaeus* 28 (2005) 271–283.

<sup>21</sup> Although László Horváth assigned the Zalabaksa site to the proto-Boleráz horizon (*Horváth, L. A.*: Die relative chronologische Position des Protoboleráz-Horizontes aufgrund des seiner südlichen Komponenten. In: *Cernavodă III–Boleráz. Ein vorgeschichtliches Phänomen zwischen dem Oberrhein und unteren Donau. Symposium Mangalia/Neptun (18.–24. Oktober 1999)*, Hrsg. von P. Roman und S. Diamandi. București 2001 [2002] 459–515, Abb. 5), it seems more likely that the site was a settlement of the Furchenstich culture.

<sup>22</sup> *Korek* (1960) Pls I–II.

<sup>23</sup> *Rezi Kató, G.*: Ásatás Zalaszentgrót–Csáfordon [Excavation at Zalaszentgrót–Csáford]. *Ősrégészeti Levelek* 1 (1999) 16.

<sup>24</sup> *Gimbutas, M.*: *The Civilisation of the Goddess*. San Francisco 1991, 10–14.

prestige articles also expressed power and rank. The incipient metallurgy of the Early Copper Age underwent a series of profound changes by the Middle Copper Age. The rather poor quality copper items of the early period, mostly jewellery hammered from native copper, were replaced by metalwork calling for specialised skills by the Middle Copper Age.<sup>25</sup> Metallurgy declined in the Late Copper Age owing to the exhaustion of surface ore deposits, resulting in the scarcity of copper.

The cult paraphernalia of this period, chiefly the few idols known from the Furchenstich distribution, differ markedly from those of the preceding period. The schematically modelled, flat female figurines with rounded buttocks and tiny breasts were decorated using the same technique as the pottery wares. One of these figurines came to light at Becsvölgye.<sup>26</sup> It has also been suggested that the Csáford type knobbed gold discs were stylised female depictions.<sup>27</sup>

The internal periodisation of the Middle Copper Age has been greatly refined in the light of the investigations carried out during the past decades. The large cultural complex, which was earlier labelled Balaton group or Balaton–Lásinja culture<sup>28</sup> and divided into three phases, is now regarded as three different cultures, each of which evolved under different cultural impacts. These cultural impacts and the diverse cultural components were first discussed by Nándor Kalicz,<sup>29</sup> according to whom the Balaton I group received strong impacts from the south, principally from the Vinča culture,<sup>30</sup> while the Balaton II–III group had contacts with the west and received strong impacts from the eastern Alpine region.<sup>31</sup> In his overview of the Balaton–Lásinja culture, Kalicz argued that Balaton–Lásinja I and Balaton–Lásinja II–III were two different cultures,<sup>32</sup> and proposed that the latter should be labelled Furchenstich culture.<sup>33</sup> In a recent study, he correlated Balaton I with the Lásinja culture and used this label for the Balaton–Lásinja culture.<sup>34</sup> The internal division of the Balaton–Lásinja II–III culture has also been refined: a part of the earlier Balaton–Lásinja II and Balaton–Lásinja III sites are now assigned to the Furchenstich culture, while another part are now known to represent sites of the proto-Boleráz period,<sup>35</sup> which could be separated on a typological basis: the wide mouthed, one-handled small cups with their distinctive decoration are lacking from proto-Boleráz assemblages, while the other Furchenstich vessels can still be found alongside a new decorative technique (channelling). The Kerbschnitt technique (excised designs), the Furchenstich (stab and drag) and incised lattice patterns disappeared or

<sup>25</sup> Kalicz (1982); *idem* (1992).

<sup>26</sup> *Bóna I.*: A becsvölgyi női idol [The female idol from Becsvölgye]. In: A Göcseji Múzeum jubileumi emlékkönyve 1950–1960. Ed. by I. Szentmihályi. Zalaegerszeg 1960, 83–95.

<sup>27</sup> For a detailed discussion, cp. Makkay, J.: Rézkori aranykorongok a későbbi Pannonia provincia területéről [Kupferzeitliche Goldscheiben aus dem Bereich der späteren Provinz Pannonien]. *Savaria* 17–18 (1983–1984 [1989]) 91–121; *Bóna, I.*: Pannonia, Dacia és ami közte van. Megjegyzések Makkay János vitacikkére [Pannonien, Dazien und was dazwischen liegt. Bemerkungen zur Streitschrift von J. Makkay]. *A Tapolcai Városi Múzeum Közleményei* 1 (1989) 243–256.

<sup>28</sup> Kalicz, N.: A rézkori balatoni csoport Veszprém megyében [Die kupferzeitliche Balaton-Gruppe im Komitat Veszprém]. *VMMK* 8 (1969) 83–89; *idem* (1969–1970); *idem*: Über die chronologische Stellung der Balaton-Gruppe in Ungarn. In: *Symposium über die Entstehung und Chronologie der Badener Kultur*. Hrsg. von B. Chropovský. Bratislava 1973, 131–136; *idem*: Újabb adatok a rézkori Hunyadi-halom csoport időrendjéhez [Neue Beiträge zur Chronologie der kupferzeitlichen Hunyadi-halom-Gruppe]. *SzMMÉ* 1979–1980, 43–62.

<sup>29</sup> Kalicz (1969–1970) 87–88.

<sup>30</sup> *Ibidem* 87.

<sup>31</sup> *Ibidem* 88.

<sup>32</sup> Kalicz, N.: The Balaton–Lásinja Culture Groups in Western Hungary, Austria and northwestern Yugoslavia. Concerning their distribution and origin. *Journal of Indo-European Studies* 8 (1980) 247–267; Kalicz (1982) 3, 9.

<sup>33</sup> *Ibidem* 8.

<sup>34</sup> Kalicz (1991) Abb. 4; *idem* (1992) 313–315; *idem* (1993) 329; *idem*: Die Balaton–Lásinja-Kultur in der Kupferzeit Südost- und Mitteleuropas. In: *Neuere Daten zur Siedlungsgeschichte und Chronologie der Kupferzeit des Karpatenbeckens*. Hrsg. von T. Kovács. IPH 7. Budapest 1995, 37.

<sup>35</sup> Kalicz (1991) 375, 380; *idem* (1993) 329; *idem* (2001).

survived in a changed form. Incrustation too disappeared.<sup>36</sup> In his most recent overview, Kalicz noted that ten of the thirty-three sites known from the Carpathian Basin were identified during the past ten years.<sup>37</sup> The introduction of this new cultural unit has become a source of uncertainty in the cultural attribution of find assemblages and, also, in archaeological terminology. The definition of typological differences, based chiefly on stray finds, can hardly be regarded as conclusive – the assignment of certain sites to the proto-Boleráz horizon is tentative at best.<sup>38</sup> It is to be hoped that the find assemblages from modern, large-scale excavations will eventually contribute to resolving this issue.

The palaeoenvironmental samples from this region indicate that large-scale forest clearance led to the decline of linden, elm, hazel and coniferous species at the close of the Balaton–Lasinja culture and the beginning of the Furchenstich period. The samples contained high amounts of cereal pollens; the soil too changed, with the earlier clay giving way to lacustrine and marshland sediments. The water level rose during the Baden period, and the proportion of plant species tolerant of trampling and grazing became higher. The forest canopy opened; oak, beech and birch dominated the forests.

### The Late Copper Age

The archaeological record reflects major changes during the Late Copper Age throughout Europe and the emergence of large cultural complexes with a uniform material culture over extensive areas. It is still unclear what triggered this process. One of these major cultural complexes is known as the Baden culture, which occupied large portions of Central and South-East Europe between 3500–3000 BC. The heritage of the Baden culture is known from sites in Bulgaria, Romania, former Yugoslavia, Austria, Switzerland, Bohemia, Slovakia, Little Poland and southern Germany. The pottery, the tools and implements, the costume adornments and jewellery articles from the culture's extensive distribution are more or less identical, as are the burial rites and the archaeological traces of religious beliefs. The similarities between the find assemblages and a number of identical cultural phenomena suggest that the communities inhabiting this vast region maintained close ties with each other and had become integrated into the same cultural complex.

The high number of settlements and burials in the Carpathian Basin indicate that this region was one of the core areas of the Baden culture. Over 1600 Baden sites are known from Hungary,<sup>39</sup> reflecting a dense settlement system for that age. Baden communities established their settlements in the most varied environments: on the plainland, on river banks, in more upland regions and even in caves.

The roughly five hundred years spanned by the Late Copper Age Baden culture corresponds to roughly sixteen to eighteen generations. There are no frightful weapons from this period, and the archaeological record contains no indications of warfare or whirlwind migrations. The finds reflect a long, peaceful period. There are no archaeological signs of armed conflicts (weapons, large cemeteries, fortified settlements, the concealment of accumulated wealth in the form of hoards). The Baden population lived peacefully and maintained extensive trade contacts, transporting their products to far-away lands using the great new innovation of the period, the four-wheeled, ox-drawn wagon. Evidence for trade and the migration of smaller communities comes from distant areas. Recent research indicates that obsidian from the Carpathian Basin was traded

<sup>36</sup> Kalicz (1991) 375, 380.

<sup>37</sup> *Idem* (2001) 417. Cp. also *idem* (1991) Abb 17; *idem* (2001) Karte 1.

<sup>38</sup> Bondár (2001a) 440; *idem* (2002) 9.

<sup>39</sup> *Idem* (2002) 11.

for the wool of long-haired sheep or the domesticate itself, bred in the Balkans.<sup>40</sup> Other commodities were perhaps also exchanged, but these have not yet been identified. Trade in metal was earlier assumed. We now know that compared to the rich metalwork of preceding periods, the amount of copper and gold artefacts declined towards the close of the Copper Age. Copper mines were exhausted and a more developed mining technology would have been necessary for the continued exploitation of the ore deposits. Native copper and smaller copper deposits provided the raw material for metallurgy. The clay moulds (Lánycsók<sup>41</sup>), metal casting waste (Szigetcsép<sup>42</sup>), a copper dagger and copper knife (Sármellék<sup>43</sup>) and the well-known diadem from Vörs<sup>44</sup> reflect the survival of sophisticated metalworking skills. The available poor quality copper was hammered into metal bands, which were then fashioned into jewellery (beads and bracelets; cp. the finds from the Alsónémedi and Budakalász cemeteries<sup>45</sup>).

The finds of the Baden culture from County Zala are rather scarce. The currently known settlements from this region span the entire period of the Late Copper Age, from the Boleráz group to the late Baden culture. Sites are known from the Keszthely area,<sup>46</sup> the broader Little Balaton region,<sup>47</sup> the Nagykanizsa area<sup>48</sup> and the Hahót Basin.<sup>49</sup> Curiously enough, no Baden sites were identified in the Kerka Valley.<sup>50</sup>

The peaceful Baden development was brought to an end by the economic changes and small-scale migration, which ushered in the Early Bronze Age. The uniform material culture of the population inhabiting an extensive area was supplanted by a colourful mosaic of regional groups, to which additional hues were added by the arrival of groups to the Carpathian Basin from various regions.

Even though settlements of the Kostolac culture, marking the close of the Baden period, have not yet been found in County Zala, the presence of Kostolac communities in this area can be assumed, at least judging from the inurned burial discovered at Keszthely, the culture's single known site in the county.<sup>51</sup>

One of the most important findings of the systematic investigations in the Hahót Basin was that the presence of the Baden culture, i.e. the basic population of the Bronze Age, could be demonstrated in this region.<sup>52</sup> The earlier blank spots disappeared from the region's archaeological

<sup>40</sup> Maran, J.: Die Badener Kultur und der ägäisch-anatolische Bereich. Ein Neubewertung eines alten Forschungsproblems. *Germania* 76 (1998) 516.

<sup>41</sup> Ecsedy, I.: Die Funde der spätkupferzeitlichen Boleráz-Gruppe von Lánycsók. *JPMÉ* 22 (1977 [1978]) 163–183.

<sup>42</sup> Korek, J.: Ásatások Szigetcsép–Tangazdaság I. lelőhelyen. A későrézkori település leletei [Ausgrabungen auf dem Friedhof von Szigetcsép–Tangazdaság. Die Funde der spätkupferzeitlichen Siedlung]. *CommArchHung* (1984) 9.

<sup>43</sup> M. Virág (1999) Fig. 2.

<sup>44</sup> Banner, J.: Die Pécelser Kultur. *ArchHung* 35. Budapest 1956. Taf. 87. 1–2.

<sup>45</sup> For a detailed overview, cp. M. Virág (1999).

<sup>46</sup> MRT 1. Map of the Copper Age sites.

<sup>47</sup> *Évezredek üzenete*, Map 5.

<sup>48</sup> Horváth (1994a) Fig. 7; Kalicz N.: Újkőkorszaki és rézkori meglepedés maradványai a nagykanizsai Inkey-kápolna mellett [Endneolithische und kupferzeitliche Besiedlung bei Nagykanizsa–Inkey Kapelle]. *Zalai Múzeum* 12 (2003) 7–48; P. Barna, J.: Késő rézkori település Nagykanizsa–Billa lelőhelyen [Late Copper Age Settlement in Nagykanizsa–Billa]. *Zalai Múzeum* 12 (2003) 97–142.

<sup>49</sup> Szőke (1995) Pl. 3.

<sup>50</sup> Bánffy, E.: The Kerka Valley in the Neolithic and the Copper Age. *Antaeus* 28 (2005) 79–89.

<sup>51</sup> MRT 1, Site 21/30.

<sup>52</sup> Horváth (1984); Bondár (1987); H. Simon, K.: Neolit és rézkori települések Tekenyé határában [Neolithische und kupferzeitliche Siedlungen in der Gemarkung von Tekenyé]. *Zalai Múzeum* 1 (1987) 7–46; Bondár, M.: Früh- und Mittelbronzezeit. In: *Sieben Jahrtausende*, 30–36; Horváth, L. A.: Eine Kupferzeitliche Kultstätte in der Gemarkung von Bak. *ActaArchHung* 42 (1990) 21–44; H. Simon, K.: Der Stand und die Aufgaben der Neolithikum- und Kupferzeitforschung im Komitat Zala. *Zalai Múzeum* 2 (1990) 47–67; Horváth, L. A.: Rézkori település Nagykapornakon [Die kupferzeitliche Siedlung bei Nagykapornak]. *Zalai Múzeum* 3 (1991) 113–135; Bondár (1991); Horváth (1994a);



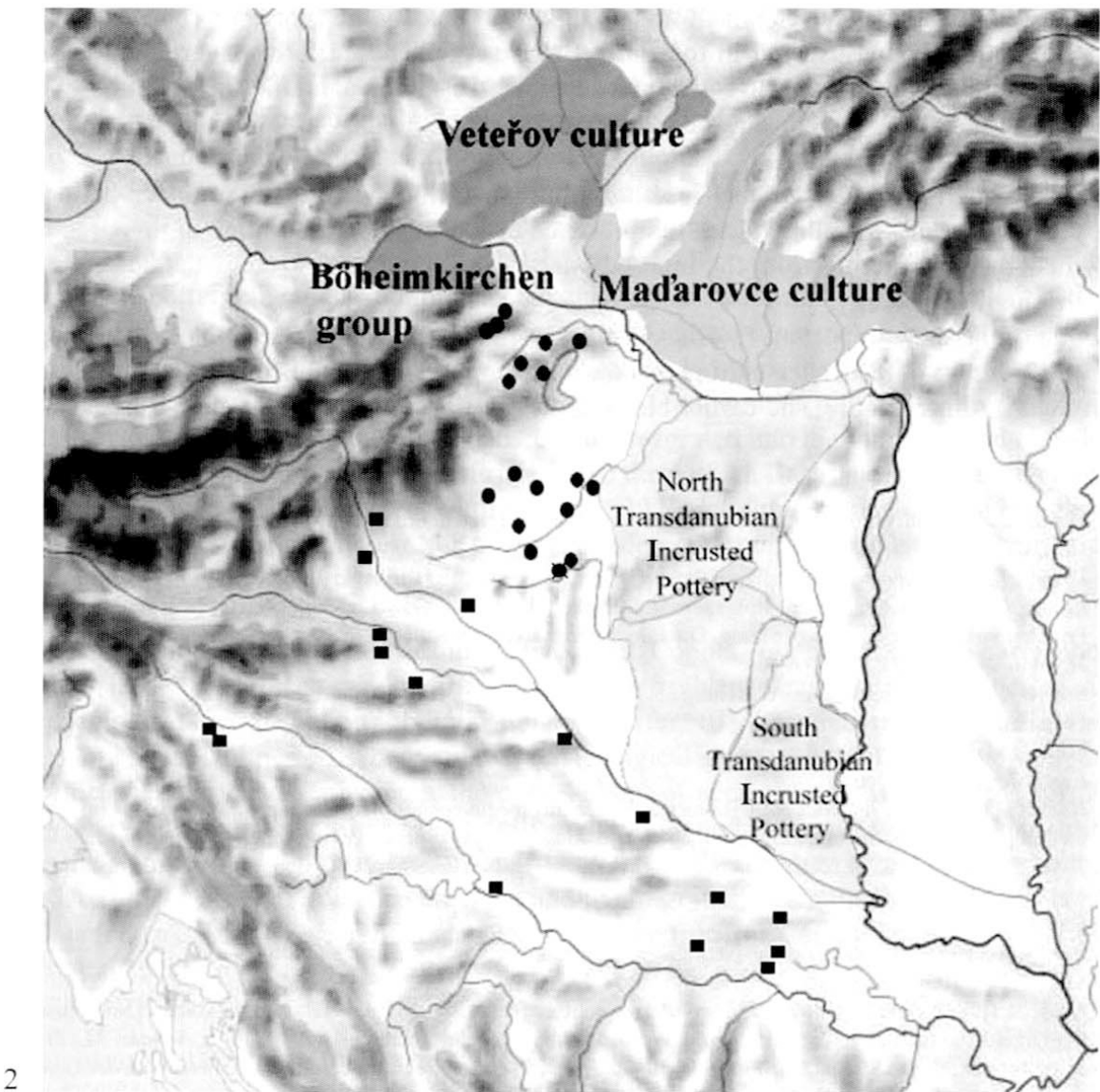
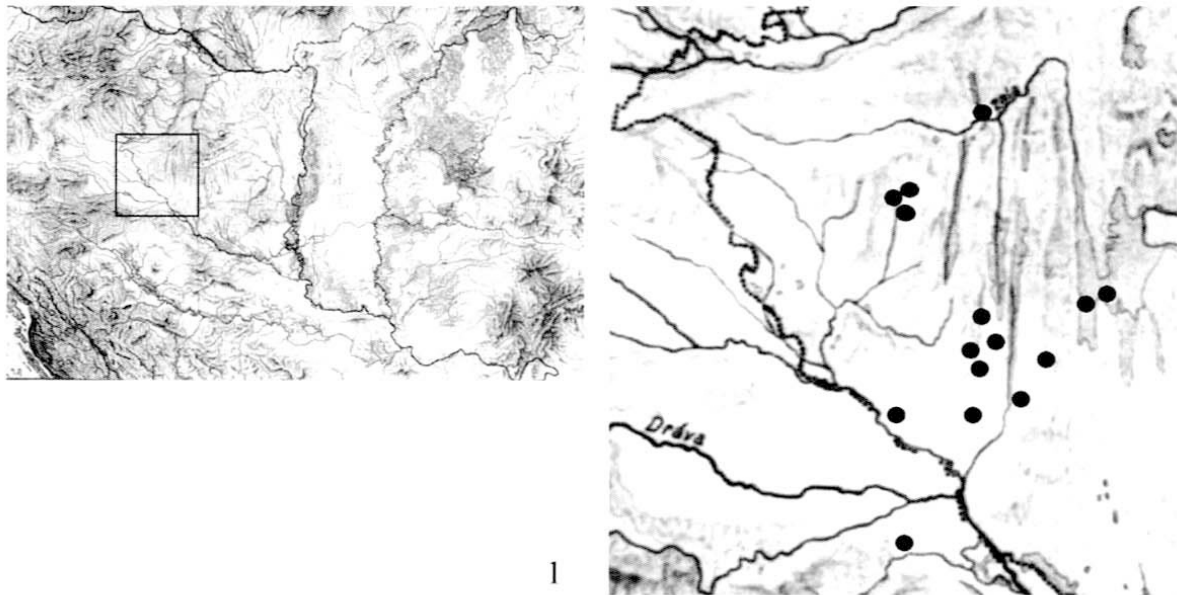


Fig. 1. 1. Distribution of the Somogyvár–Vinkovci culture in south-western Hungary (after Bondár 1995, 1998);  
2. distribution of the eastern group of the Mađarovce–Veteřov–Böheimkirchen culture (● archaeological sites; ◆: Zalaegerszeg–Ságod–Bekeháza) and of the Litzenkeramik in north-western Croatia, north-eastern Slovenia and south-eastern Styria (■ archaeological sites) and on the territory of neighbouring cultures (after Schubert 1973; Kiss 2002. Abb. 7)

map, and it became clear that there were no breaks in the prehistoric settlement of the region, even if tangible remains of Late Copper Age communities were not identified in all micro-regions.

## The Early Bronze Age

The identification of the earliest Bronze Age population of south-western Transdanubia was problematic for quite a long time. The assumed presence of the “Makó group of the Zók culture” has not yet been confirmed by sites. Neither have finds of the Vučedol culture been brought to light, although András L. Horváth has suggested that a copper axe (of uncertain date) may indicate a possible Vučedol presence in the Zalaegerszeg area.<sup>53</sup> The earliest Bronze Age population in the Nagykanizsa area, in the Little Balaton region, in the Keszthely area and in the Hahót Basin can be identified with the Somogyvár–Vinkovci culture.<sup>54</sup>

Twenty-five sites of the Early Bronze Age Somogyvár–Vinkovci culture are known from County Zala.<sup>55</sup> Most of these are small settlement sites yielding no more than a few pottery fragments; only a few larger settlements are known (Nagykanizsa–Sánc, Nagykanizsa–Inkey-kápolna, Letenye, Börzönce–Temetői-dűlő). The fortified settlements in this region (Nagygörbő,<sup>56</sup> Oltárc–Márkihegy and Galambok–Öreghegy<sup>57</sup>) are also noteworthy. Somogyvár–Vinkovci sites can be found in the Little Balaton region, the Keszthely and Nagykanizsa areas, and in the Hahót Basin. The westernmost site was identified at Lenti.<sup>58</sup> Not one single Early Bronze Age site was found in the Kerka micro-region; only at Kissziget–Temető domb, lying on the edge of the micro-region, was an extensive Early Bronze Age settlement with the culture’s typical pottery wares discovered during the field surveys (*Fig. 1. 1*). A recently investigated settlement lies at Muraszemenye by the confluence of the Kerka and Mura rivers; this Somogyvár–Vinkovci site was investigated in 2000 by Judit Kvassay during the rescue excavations preceding the motorway construction.<sup>59</sup>

The low number of sites can in part be explained by the structure of the settlements. The few larger excavated settlement sites (Pécs–Nagyárpád, Szava, Zók–Várhegy, Nagykanizsa–Inkey-kápolna, Vinkovci, Börzönce) yielded only a scatter of pits lying 15–20 m apart.

The Börzönce site, a settlement extending over an estimated 8–10,000 m<sup>2</sup>, of which about ten per cent has been investigated, yielded a rich Early Bronze Age material: the finds included over sixty vessels, which either survived intact or could be assembled from their fragments, a figurine and a figurine head, the fragment of a clay wagon model, small clay wheels, a clay mould, miniature animal figurines, spindle whorls, small stone axes and a few silex blades. The finds from Börzönce indicated that the ceramic repertoire of the Somogyvár–Vinkovci culture was much richer than earlier believed and the new vessel types brought to light enabled the elaboration of a

*Bánffy* (1995a); *idem* (1995b); *Bondár, M.*: Késő rézkor [The Late Copper Age]. In: *Évezredek üzenete*, 34–41; *Horváth–H. Simon* (1997).

<sup>53</sup> *Horváth, L. A.*: Neue Angaben zum Übergang von der Kupfer- bis Frühbronzezeit in Südwestungarn. *Zalai Múzeum* 10 (2001) 57.

<sup>54</sup> *Bondár, M.*: Eine frühbronzezeitliche Siedlung in Börzönce, Komitat Zala (Vorbericht). *Zalai Múzeum* 5 (1994) 9–19; *Horváth* (1994a); *Bondár* (1995b); *idem* (1998); *idem* (2001a); *idem* (2001b); *idem* (2003).

<sup>55</sup> *Bondár* (1995b) Fig. 19; *idem* (1998) Fig. 2: Sites 3, 4, 6, 10, 23, 26, 32, 38, 39, 40, 41, 42, 57, 62, 70, 71, 72, 77, 92, 93, 99, 100, 101, 121, 122. The distribution map had to be re-published in a suitable size: *idem* (1998) Fig. 2, the site numbers refer to this map. For additional information on the relevant sites, cp. *idem* (1995b).

<sup>56</sup> *Nováki, Gy.*: A nagygörbő-várhegyi korabronzkori erődített telep [The Early Bronze Age fortified settlement at Nagygörbő–Várhegy]. *ArchÉrt* 92 (1965) 168–175.

<sup>57</sup> *Horváth* (1994a) 97.

<sup>58</sup> *Bondár* (1998) Fig. 2, Site 57.

<sup>59</sup> Judit Kvassay’s kind personal communication.

more detailed typology.<sup>60</sup> Most vessel forms had several variants. It became clear that the vessels of this culture were not restricted to four or five typical forms and that the variants made up complete vessel sets. The validity and usefulness of the typology set up on the basis of the Börzönce finds could be tested on the material from Nagykanizsa–Inkey-kápolna,<sup>61</sup> where the majority of the vessel types found at Börzönce could be identified among the pottery finds. The ceramic inventory from Nagykanizsa–Inkey-kápolna included types which had only been tentatively reconstructed from the fragments found at Börzönce. One of the more unusual cult finds was a perforated phallic pendant.<sup>62</sup>

The analysis of the known Somogyvár–Vinkovci sites indicated a settlement pattern with a few larger centres surrounded by smaller, more briefly occupied settlements.<sup>63</sup> Two of these centres lay in the southern part of County Zala: the settlements at Nagykanizsa–Inkey-kápolna and Börzönce probably functioned as central places.<sup>64</sup>

The extrapolation of the archaeological evidence for a broader area suggests that the Somogyvár–Vinkovci culture (the Hungarian counterpart of the Vinkovci culture of Yugoslavia) represents the earliest Bronze Age population in the southern and south-western areas of County Zala. The culture's chronological position can be firmly set between the classical Vučedol culture and the Kisapostag culture; its internal periodisation, however, is still debated.<sup>65</sup>

## The Middle Bronze Age

Little was known until quite recently about the Bronze Age cultures of the subsequent period in the region. The distribution of the Kisapostag culture, which succeeded the Somogyvár–Vinkovci culture in Phase 3 of the Early Bronze Age over most of Transdanubia, only extended to the western fringes of the Little Balaton region. The same holds true for the Transdanubian Incrusted Pottery culture, which developed from the Kisapostag culture at the turn of the Early and Middle Bronze Age, whose western boundary lay in the Rinya and the Little Balaton region.<sup>66</sup> The apparent lack of a Bronze Age population in this region at the close of the Early Bronze Age and during the Middle Bronze Age (RB A1–A2) was resolved by dating the earliest Tumulus assemblages from County Zala to the Koszider period, representing the last phase of the Middle Bronze Age (RB A2–B1).<sup>67</sup> In this scenario, the Tumulus groups arriving to the westernmost areas of Transdanubia, probably from Lower Austria, became neighbours of the late Incrusted Pottery culture communities living east of the Little Balaton region, also assigned to the Koszider period.<sup>68</sup>

<sup>60</sup> Bondár (1995b) 200–213, Figs 13–18.

<sup>61</sup> *Idem* (2003).

<sup>62</sup> Horváth (1984) Fig. 5. 1; *idem* (1994a) Fig. 8.

<sup>63</sup> Bondár (1995b) Pl. 3.

<sup>64</sup> *Ibidem* 234.

<sup>65</sup> Bondár (2001b).

<sup>66</sup> Kovács (1994) 119; Horváth (1994a) Fig. 11; Szöke (1995) 23; Horváth (2000) 13; Kiss (2002) Abb. 1, Abb. 3, Abb. 7.

<sup>67</sup> Bóna (1992) 34–35; *Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss*. Hrsg. von W. Meier-Arendt. Frankfurt am Main 1992. 40–41; Zeittabelle; Horváth (1994a) 97; *idem* (1994b) 219; Honti (1994) 11; Kiss (1997) 47; Ilon (1999) 258; H. Simon–Horváth (1999) 202; Kiss, V.: A mészbetétes kerámia kultúrája kapcsolatai a Kárpát-medence nyugati területeivel és a közép-európai kultúrákkal a középső bronzkorban [Die Beziehungen der Kultur der inkrustierten Keramik in der westlichen Gebieten des Karpatenbeckens und zur mitteleuropäischen Kulturen in der mittleren Bronzezeit]. *KMMK* 7 (2000) 27; Kiss (2002) 491–492. For the correlation of the Hungarian and Central European Bronze Age chronologies and absolute dates, cp. Lippert (1999) Tab. 2; cp. also Kiss (2002) Abb. 8.

<sup>68</sup> Cp. Kovács (1994); *idem*: Chronologische Fragen des Überganges von der mittleren- zur Spätbronzezeit in Transdanubien. *Zalai Múzeum* 5 (1994) 159–172; Honti (1994); Kiss (1997); *idem* (2002) 484–486.

However, the pollen sequence from the palaeoenvironmental sampling location at Pölöske reflects extensive forest clearance and a developed crop cultivation in the period between 1890–1520 BC; the retreat of the closed deciduous woodland (oak, hornbeam, beech) is accompanied by the appearance of secondary birch and hazel forests, and the marked presence of ferns, cereals, weeds and plant species typical for pastureland. The micro-charcoal in the samples suggest that the communities living in this region during the later Middle Bronze Age and towards the end of this period created open areas for pasturing their livestock and for arable farming with slash-and-burn forest clearance.<sup>69</sup> Even though no Middle Bronze Age (RB A2–B1) sites have yet been identified in the Hahót Valley, the human impact on the environment reflected in the samples from Pölöske can be associated with two more or less contemporary cultural complexes.<sup>70</sup>

One of these is the Veteřov–Böheimkirchen culture, which falls between 1880–1610 BC on the basis of the radiocarbon dates<sup>71</sup> and can thus be correlated with this period. Distributed in Moravia and Lower Austria, this culture is usually interpreted as part of a larger culture province in view of the many similarities with the Maďarovce culture of south-western Slovakia (Maďarovce–Veteřov–Böheimkirchen complex).<sup>72</sup> The attribution of earlier and more recently unearthed finds from the Burgenland and north-western Transdanubia to the Maďarovce–Veteřov–Böheimkirchen complex (*Fig. 1. 2*) implies that this culture was also distributed east of the Vienna Woods, along the Lajta and Rába rivers.<sup>73</sup> The detailed typological analysis of the pottery from the settlement at Zalaegerszeg–Ságod-Bekeháza (*Fig. 2. 1–13*),<sup>74</sup> a site excavated as part of the archaeological investigations preceding the Zalaegerszeg bypass road, suggests that the southern boundary of the culture's distribution was marked by the River Zala. In the currently used relative chronological framework, the appearance of the Veteřov–Böheimkirchen complex postdates the Gáta–Wieselburg period (RB A2)<sup>75</sup> and can be assigned to the Koszider period (RB B1, 1600–1500 BC). This dating is supported by the pottery finds from Zalaszentiván–Kisfaludi-hegy, assigned to the Veteřov culture,<sup>76</sup> and the Koszider hoard from the same site.<sup>77</sup>

<sup>69</sup> Juhász, I. – Drescher-Schneider, R. – Andrieu-Ponel, V. – de Beaulieu, J.-L.: Anthropogenetic indicators in a palynological record from Pölöske, Zala Region, Western Hungary. In: *Die Drau-, Mur- und Raab-Region*, 32, 35–36; Juhász, I. E.: A Délnyugat Dunántúl negyedkori vegetációtörténetének palinológiai rekonstrukciója [Reconstitution palynologique de la végétation depuis le Tardiglaciaire dans la région de Zala, sud-ouest de la Hongrie]. PhD Thesis. Pécs–Marseille 2002, 27–28.

<sup>70</sup> For the radiocarbon dates, which could be correlated with the absolute dating of the RB A2 phase, cp. Krause, R.: Zur Chronologie der frühen und mittleren Bronzezeit Süddeutschlands der Schweiz und Österreichs. In: *Absolute Chronology Archaeological Europe 2500–500 BC*. Hrsg. von K. Randsborg. Acta Archaeologica Copenhagen (1996) 73–86; Lippert (1999) 345, Tab. 2.

<sup>71</sup> Neugebauer (1994) 18–20.

<sup>72</sup> Benkovský-Pivovarová, Z.: Zur Enddatierung des Kulturkreises Maďarovce–Veteřov–Böheimkirchen. *Germania* 54 (1976) 341; *idem* (1981) 34; *idem*: Zu einigen terminologischen Fragen des Kulturkreises Maďarovce–Veteřov–Böheimkirchen. *SlovArch* 29 (1981) 17; Ruttkay, E.: Zwei verzierte Goldplättchen aus dem frühbronzezeitlichen Gräberfeld von Hainburg-Teichtal. *MAGW* 118–119 (1988–89) 140–145; Stuchlík, S.: Die Veteřov-Gruppe und die Entstehung der Hügelgräberkultur in Mähren. *PZ* 67 (1992) 16; Benkovský-Pivovarová (1996) 157.

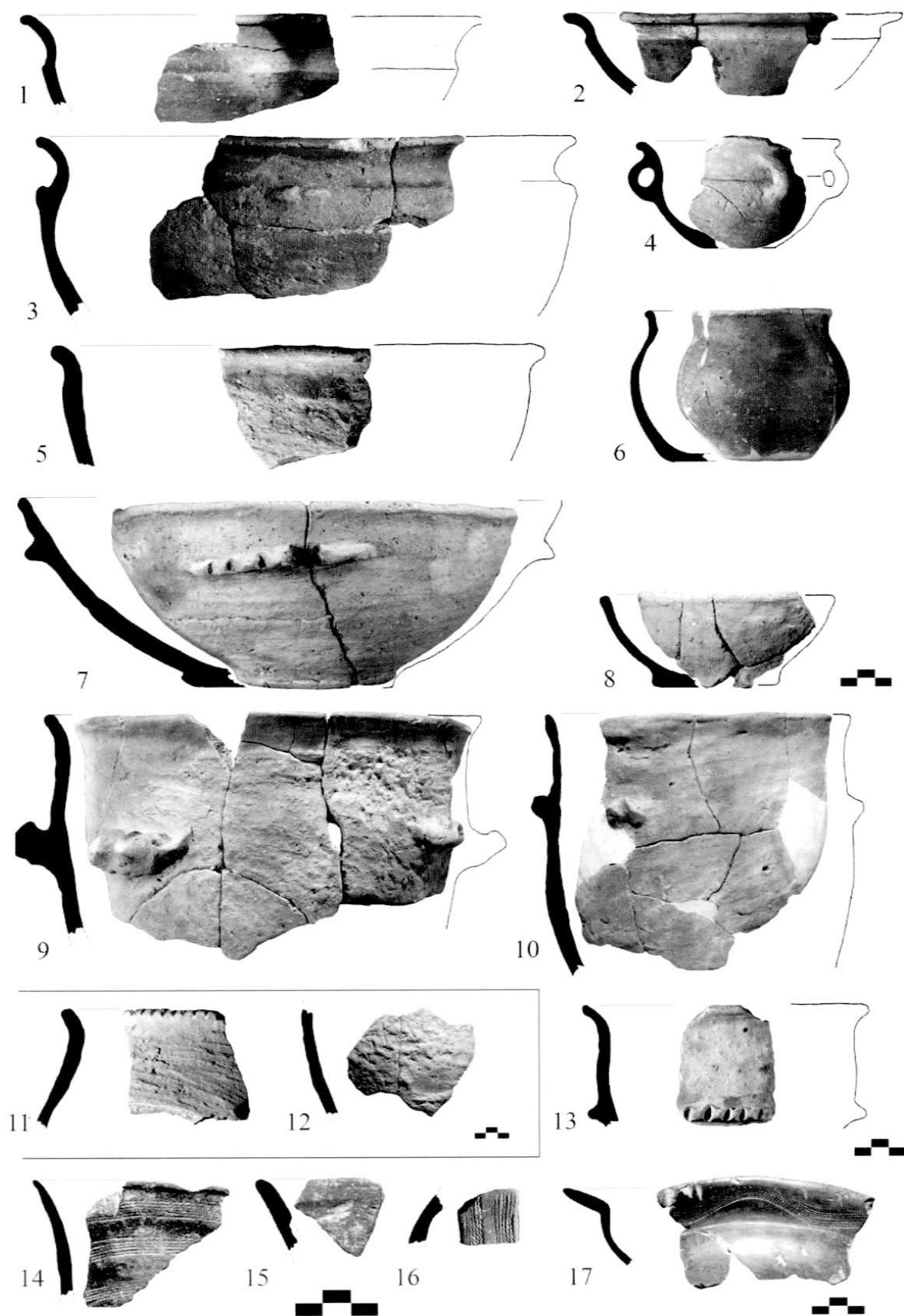
<sup>73</sup> *Idem* (1981) 34–35; Kovács (1984) 382; Benkovský-Pivovarová (1995) Abb. 4; *idem* (1996) 157; Marton, E.: Agyagtárgyak a velemi Szent Vidről [Clay finds from Velem St. Vid]. *Pápai Múzeumi Értesítő* 6 (1996) 250; Ilon (1999) Abb. 1; Ilon, G. – Költő, L.: Középső bronzkori emlékek a velemi Szt. Vidről. Egy tolnanémedi típusú (VII. velemi) kincslelet? [Middle Bronze Age artifacts from Szent Vid of Velem. Another of the Tolnanémedi-type (VII. Velem) artifact sortiment?]. *KMMK* 7 (2000) Pl. IV. 1–2; Kvassay *et al.* (2004) 137. Special thanks are due to Dr. Elisabeth Ruttkay for her kind help and for sharing her knowledge of the eastern Austrian find assemblages.

<sup>74</sup> Kvassay *et al.* (2004) 126–139, Figs 11–19.

<sup>75</sup> Cp. Benkovský-Pivovarová (1995) Abb. 4.

<sup>76</sup> Száraz (2002a) 517–518, Fig. 1. 1. 1. 3.

<sup>77</sup> This hoard was assigned to the Tumulus culture. Bóna, I.: Chronologie der Hortfunde vom Koszider-Typus. *Acta ArchHung* 9 (1958) 218, Taf. VI; Bóna (1992) 36; Száraz (2002b) 10, 17.



*Fig. 2. Bronze Age pottery from Zalaegerszeg-Ságod-Bekeháza (RB A2-B1)*

CENTRAL EUR. CHRONOLOGY	SE STYRIA, PREKMURJE, POMURJE	NW CROATIA	TRANSDANUBIA/ SW HUNGARY	HUNGARIAN CHRONOLOGY
	POST-ROMAN PERIOD			
ROMAN AGE	476 Later	ROMAN AGE		
	200 Earlier			
	Year 0			
IRON AGE	150 250 450 600 750	D C B A D C	La Tène  SW Pannonian Hallstatt group	La Tène  SW Pannonian Hallstatt group
				EARLY LATE EARLY LATE IRON AGE
BRONZE AGE	1.000 1.300 1.450 1.600 1.800	B A D C B A <sub>2</sub> A <sub>1</sub>	Ruše  Virovitica Litzen B Litzen A2 Litzen A1 Protolitzen	Urnfield culture  Tumulus culture Veteřov? Incrusted Pottery Kisapostag
				EARLY LATE MIDDLE LATE MIDDLE LATE MIDDLE LATE EARLY LATE BRONZE AGE
LATE NEOLITHIC (COPPER AGE)	2.200 2.500 2.800	?	Vinkovci Vučedol	Somogyvár Vučedol
				EARLY LATE MIDDLE LATE MIDDLE LATE MIDDLE LATE EARLY LATE COPPER AGE
LATE NEOL. Late	Baden - Ossarn phase		Baden	Baden Kostolac
Early	Boleráz			Boleráz
	Furchenstich - Retz type		Retz-Gajary	Proto-Boleráz
	Lasinja		Lasinja	Balaton 2-3/Furchenstich
			Seče	Balaton-Lasinja
	4.000			Late Lengyel III <sup>a b</sup>
MIDDLE NEOLITHIC	MEAG IIb (Epilengyel)			
	MEAG IIa			Lengyel II (classical)
	Painted Pottery/MEAG (Moravian-East Austrian Group)			Lengyel I (early)
	4.200			Sé
EARLY NEOLITHIC	Stichband Pottery ?		Sopot	
	Notenkopf Pottery ?			Zseliz
	Linear Pottery ?		Korenovo (Linear Pottery)	Later Linear Pottery
				Earlier
	5.500			
	Late Mesolithic		Starčevo	Starčevo
	6.000			
				EARLY LATE MIDDLE LATE MIDDLE LATE MIDDLE LATE EARLY LATE NEOLITHIC

Fig. 3. Chronology of prehistoric cultures in south-western Hungary, north-western Croatia, north-eastern Slovenia and south-eastern Styria (after Lippert 1999, Tafel 2; Marković 1985, 1990, 1993, 2003; Teržan 1999, with modifications)

The evaluation and question of whether the Litzenkeramik, the other characteristic pottery ware from the settlement uncovered at Bekeháza (Fig. 2. 14–17),<sup>78</sup> represents an independent cultural horizon is still the subject of many debates.<sup>79</sup> The rescue excavations preceding motorway

<sup>78</sup> Kvassay et al. (2004) 132, 134–136, Fig. 18. 8–12.

<sup>79</sup> Benkovsky-Pivovarová (1972) 204–208; *idem* (1981) 29–31; Neugebauer, J.-W.: Böheimkirchen. Monographie des namengebenden Fundortes der Böheimkirchnergruppe der Veteřov-Kultur. ArchA 61–62 (1977) 31–207; *idem*: Ein neuer bronzezeitlicher Siedlungsfund mit „Litzenkeramik“ und einem Knochenobjekt mit „mykenischen“ Ornamenten von Guntramsdorf. Fundberichte aus Österreich 16 (1977) 199–206; Benkovsky-Pivovarová (1981) 33; Neu-

constructions in Slovenia have brought to light settlements at Slivnica and Murska Sobota-Nova tabla,<sup>80</sup> which indicate that in contrast to other regions, Litzenkeramik occurs independently, unmixed with the find assemblages of other cultures in the Drava–Sava–Mura region, which in turn supports the interpretation of the Litzenkeramik as an independent culture in this region, confirming the opinion of Croatian prehistorians (based in part on mixed assemblages).<sup>81</sup> The currently known distribution of Litzenkeramik finds from Austria, Hungary, Slovakia, Croatia and Slovenia suggests that in northern Croatia (the Varaždin and Koprivnica area, Gušće, as well as the sites around Đakovo) and the neighbouring Slovenian regions to its west (the Ljubljana and the Maribor area, and Murska Sobota to the north), the Litzenkeramik represented an independent culture.<sup>82</sup> The high number of Litzenkeramik pottery sherds among the finds from phase 3 of the Wildon–Schlossberg settlement<sup>83</sup> imply that the same culture was distributed in southern Styria along the Mura, extending up to Graz (Fig. 1. 2).<sup>84</sup> The refinement of the internal Litzenkeramik chronology, divided into several phases (Fig. 3),<sup>85</sup> is now possible on the basis of closed find assemblages (Fig. 1. 1), which will hopefully clarify the culture's relations<sup>86</sup> with the Kis-

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- gebauer (1994) 141–143; Kovács (1997); Vékony, G.: A koszideri korszak a Dunántúlon – Die Koszider-Periode in Transdanubien. *KMMK* 7 (2000) 176–178.
- <sup>80</sup> *Štrmnčik-Gulić, M.*: The First Millennium BC between Drava and Pohorje: Some of newly discovered Settlement Sites. In: *Die Drau-, Mur- und Raab-Region*, 103–120; *Guštin, M.* – *Tiefengraber, G.*: Prazgovodinske najdbe z avtocestnega odseka Murska Sobota–Nova tabla (Vorgeschichtliche Funde aus dem Autobahnabschnitt bei Murska Sobota–Nova tabla). *Arheološki Vestnik* 52 (2001) 109; *Tiefengraber, G.*: Vorbericht über die Ausgrabungen 1999 und 2001 in Murska Sobota/Nova tabla unter besonderer Berücksichtigung der spätbronze- und eisenzeitlichen Funde. In: *Die Drau-, Mur- und Raab-Region*, 80; *Guštin, M.*: Starejša bronasta doba v Prekmurju. Horizont Pramenaste (Litzen) lončenine [Die ältere Bronzezeit in Prekmurje. Horizont der Litzenkeramik]. *Zbornik Soboškega Muzeja* 8 (2005) 85–98; cp. also *Culiberg, M.*: Palaeovegetational Research in Prekmurje, Slovenia. In: *Pollenanalytische Daten*, 373.
- <sup>81</sup> Cp. *Majnarić-Pandžić* (1976a); *idem* (1976b); *Marković* (1988–1989) 419, Abb. 4; *idem* (1990); *Majnarić-Pandžić, N.*: Brončano i željezno doba [The Bronze and Iron Ages]. In: *Prapovijest. Povijest umjetnosti u Hrvatskoj* I. Ed. by S. Dimitrijević, T. Težak-Gregl and N. Majnarić-Pandžić. Zagreb 1998, 177, Map II; *Marković* (2003).
- <sup>82</sup> *Dular, J.*: Ältere, mittlere und jüngere Bronzezeit in Slawonien – Forschungsstand und Probleme. *Arheološki Vestnik* 50 (1999) 82–96; *P. Fischl–Kiss* (2002) 135–139; *Martinec, M.*: Brončanodobna naseobinska jama s lokaliteta Grabrovac (The Bronze Age pit dwelling from the site of Grabrovac). *OpArch* 26 (2002) 275–321; *Marković* (2003); *Kvassay et al.* (2004) 132, 134–136; *Kiss, V.*: Problems of the Koszider period in Transdanubia. In: *Opinions on the Koszider period*. Ed. by I. Poroszlai and M. Vicze. Budapest–Százhalombatta (in print). Pottery made using the same technique in Bosnia-Herzegovina is no longer regarded as part of the Litzenkeramik. *Čović, B.*: Posuška kultura [Posušje-Kultur]. *Glasnik Zemaljskog Muzeja Bosne i Hercegovine u Sarajevu* 44 (1989) 61–128.
- <sup>83</sup> *Kramer, D.*: Aus der Ur- und Frühgeschichte von Wildon. *Mitteilungsblatt der Korrespondenten der Historischen Landeskommission für Steiermark* 2 (1989) 28–29; *idem*: Neue Aspekte zur älteren steirischen Siedlungsgeschichte. In: *Népek a Mura mentén I – Völker an der Mur I*. Hrsg. von J. Balazic and L. Vándor. Murska Sobota–Zalaegerszeg 1996, 9.
- <sup>84</sup> The Early Bronze Age pottery brought to light at Raababerg bei Graz, linked to the Kisapostag culture by Jörg Obereder (*Obereder, J.*: Die jungneolithische Siedlung Raababerg bei Graz. Unpubl. Diplomarbeit. Wien 1989, 32–33, Taf. 48; *Lippert* (1999) Tab. 3. Fo. 29), can be assigned to the Litzenkeramik in view of the similarities with the finds from the Murska Sobota settlement. We wish to thank Prof. Gerhard Trnka for calling our attention to the finds from Raababerg. There are several other, yet unpublished sites in south-eastern Styria and Slovenia (Georg Tiefengraber's kind personal communication). Litzenkeramik from more northerly sites in the Burgenland, usually found together with Veteřov material, can be interpreted as imports in the eastern group of the Veteřov–Böheimkirchen culture, which reached the area along the contact zone by the confluence of the Mura and the Rába rivers.
- <sup>85</sup> *Benkovsky-Pivovarová* (1972) 209; *idem* (1981) 32; *Majnarić-Pandžić* (1976a); *idem* (1976b); *Marković, Z.*: Neka pitanja neolitika, eneolitika i brončanog doba našičkog kraja i Đakovštine (Zu einigen Fragen des Neolithikums, Äneolithikums und der Bronzezeit im Gebiet von Našice und Đakovo). In: *Arheološka istraživanja u Istočnoj Slavoniji i Baranji*. IHAD 9. Ed. by B. Čečuk, I. Marović and Ž. Rapanić. Zagreb 1984, 22–24; *Marković* (1988–1989) 415–417; *idem* (1990).
- <sup>86</sup> Cp. *Benkovsky-Pivovarová* (1972) 208–209; *idem* (1981) 32–33; *Majnarić-Pandžić, N.*: Srednje brončano doba u istočnoj Slavoniji (Die mittlere Bronzezeit in Ostslawonien). In: *Arheološka istraživanja u Istočnoj Slavoniji i Baranji*. Izdanja Hrvatsko Arheološko Društvo 9. Ed. by B. Čečuk, I. Marović and Ž. Rapanić. Zagreb 1984, 63–90; *Šimić, J.*: Kulturne skupine s inkrustiranom keramikom u brončanom dobu sjeveroistočne Hrvatske [Cultural groups with

apostag and Belegiš cultures too.<sup>87</sup> It can thus be reasonably assumed that the communities in the Hahót Basin maintained contact with the regions in which the Litzenkeramik was distributed, i.e. the region between the Sava and the middle reaches of the Mura and Drava rivers.

The Litzenkeramik found at Bekeháza was of a far better quality than the other pottery from the settlement, suggesting that it can perhaps be interpreted as an imported fine ware. In view of the coarse surface treatment of the pottery assigned to the local Veteřov–Böheimkirchen group – recalling the household pottery of the Somogyvár–Vinkovci, and of the Tumulus and the Urn-field cultures – it is hardly surprising that the determination of which population settled in the western part of County Zala at the close of the Early Bronze Age and during the Middle Bronze Age from the stray finds has been near impossible. It is still uncertain whether the region south of the River Zala was drawn into the cultural orb of the Veteřov–Böheimkirchen culture or the Litzenkeramik (whose nearest sites lie at Koprivnički Ivanec and Murska Sobota; *Fig. 1. 2*). The Incrusted Pottery culture communities living east of the Little Balaton region and the River Rinya maintained contact with both, as shown by the knob-footed cup of the Veteřov–Böheimkirchen culture found in a closed pit of the Vörs–Papkert A settlement and the imported Litzenkeramik from the pits uncovered at Vörs–Kerékerdő.<sup>88</sup> The boundary between the Incrusted Pottery culture and the Croatian Litzenkeramik probably lay along the River Drava (with the exception of the Danube–Drava confluence). On the testimony of the finds from Murska Sobota, communities using Litzenkeramik also settled north of the River Mura, and thus the cultural attribution of the region between the Lower Zala Valley and the River Mura remains uncertain for the time being.

## The Late Bronze Age

The first phase of the Late Bronze Age (1500–900 BC) is correlated with the earliest Tumulus sites (*Fig. 4. 1*), which are generally assigned to the Koszider period. However, in view of the above dating of the eastern group of the Veteřov–Böheimkirchen complex, it seems more likely that the finds from this phase should be assigned to the end of the Koszider period (late RB B1–B2). Finds of the earliest Tumulus phase (labelled Mistelbach–Regelsbrunn type in eastern Austria) are known from the Keszthely area and the Little Balaton region, from Esztergályhorváti–

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encrusted ceramics in the Bronze Age in North-East Croatia]. Osijek 2000, 106–107; *Tasić, N.*: The problem of the Belegiš (Belegiš–Cruceni, Belegiš–Bobda) culture. Genesis, duration and periodization. In: *Festschrift für G. Lazarovici*. Hrsg. von F. Draşovean. Bibliotheca Historica et Archaeologica Banatica 30. Timişoara 2001, 311–321; *Marković* (2003): the Protolitzen, Litzen A1, A2 and B1 phases.

<sup>87</sup> The Litzenkeramik in find assemblages of the early Tumulus phases in eastern Austria and south-western Slovakia (Mistelbach–Regelsbrunn and Dolný Peter phase; cp. *Dušek, M.*: Birituelles Gräberfelder der Karpatenländischen Hügelgräberkultur in Dolný Peter. In: *M. Dušek: Bronzezeitliche Gräberfelder in der Südwestlowakei*. Archaeologica Slovaca Catalogi 4. Bratislava 1969, 50–81; *Benkovsky-Pivovarová* (1981) 30, 32–33; *Ranseder, C.*: Siedlungsfunde der mittleren Bronzezeit auf Purbach und Müllendorf, Burgenland. Ein Beitrag zur Stufe Bronzezeit B1 in Österreich. Unpubl. Diplomarbeit. Wien 1990; *Benkovsky-Pivovarová* (1992) 343; *Kovács* (1997); *Ožđani, O.*: Einige Anmerkungen zum Vorkommen der „Litzen“-Verzierung im Milieu der Otomani-Kultur und ihr chronologischer Aspekt. *Východoslovenský Pravek* 5 (1998) 51–58; *Egry, I.*: Halomsíros temető Győr–Ménfőcsanak-Bevásárlóközpont területén [Cemetery of Tumulus Culture in the territory of the Shopping-center of Győr–Ménfőcsanak]. In: *ΜΩΜΟΣ III. Őskoros Kutatók III. Összejövetelének konferenciakötete. Halottkultusz és temetkezés*. Ed. by G. Ilon. Szombathely 2004, 121–137) reflect cultural interaction between neighbouring regions and can be regarded as part of the Tumulus pottery wares, similarly to the Litzen decorated pottery of the Belegiš culture. *Benkovsky-Pivovarová* (1981) Tab. 1; *idem* (1992).

<sup>88</sup> *Honti* (1994) *Fig. 2*; *idem*: Neue Angaben zur Geschichte der Kultur der transdanubischen Inkrustierten Keramik im Komitat Somogy. *Zalai Múzeum* 5 (1994) 173–188, Abb. 2. 2, Abb. 8. 4; *Kiss* (2002) 488–489; *P. Fischl–Kiss* (2002) 136.



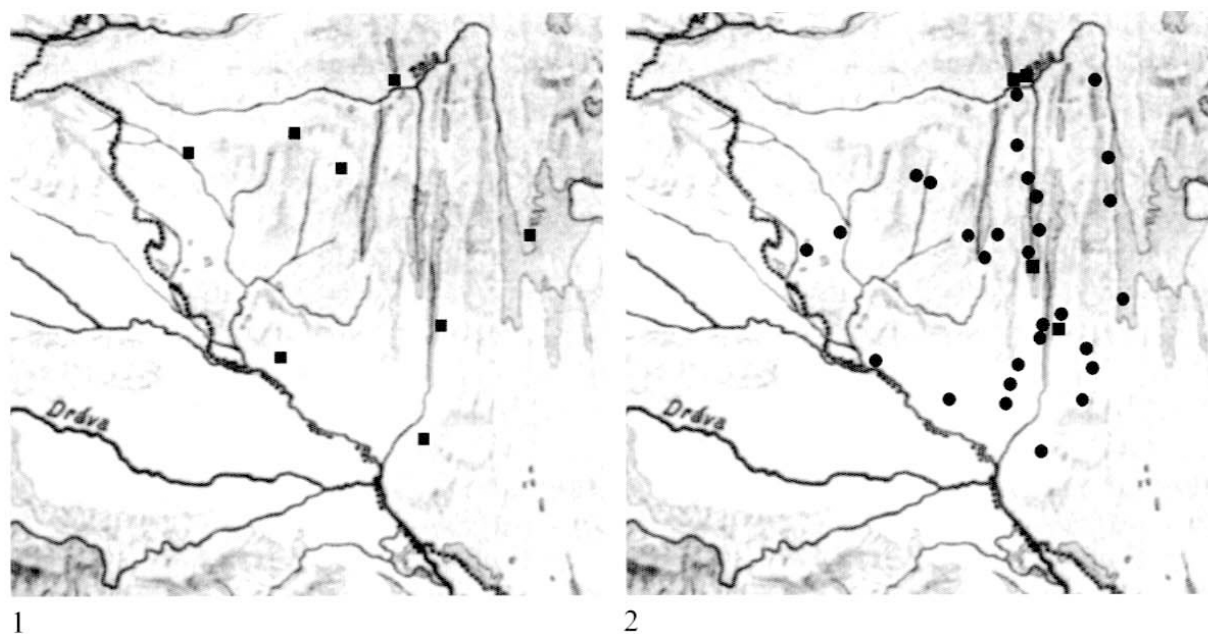


Fig. 4. 1. Distribution of the Tumulus culture (RB B1–2 and RB C), 2. sites of the late Tumulus–Early Urnfield period, the earlier Urnfield culture (● RB D–Ha A1), and the later Urnfield culture (■ Ha A2–Ha B) (after Müller 1971; Horváth 1994a; Bánffy 1998, 1999)

Alsóbárándpuszta, as well as from the Zalaegerszeg area, from the Gellénháza–Budai-szer II site and from the hillfort at Zalaszentiván–Kisfaludi-hegy.<sup>89</sup> Falling between the above two regions, the Hahót Basin was probably also part of the Tumulus distribution.

Settlements of the later Tumulus culture (RB B2–C) have been identified at Gelsesziget–Homoksziget and the Miklósfa–Mórichelyi fishponds. The Gelsesziget settlement lay on an islet rising above the one-time floodplain of the Principális channel; a timber framed house measuring 10 m by 20 m was excavated at this site. The rich finds included pottery, bronze pins, tanged bronze daggers and a variety of bone implements. The high number of animal bones reflects the importance of pastoral farming in the life of the settlement's one-time occupants.<sup>90</sup> This is also supported by the pollen profile from Pötréte, according to which the proportion of cereal pollens in the first half of the period between 1690–1370 BC declined parallel to the rise of the water level, implying that the area around the marsh was used for pasturing livestock. The excavations preceding the construction of the M7 motorway have recently brought to light the remains of a settlement from this period at Muraszemenye.<sup>91</sup> Other sites are Németfalu–Egry-híd in the Göcsej region farther to the west<sup>92</sup> and Ramocsa in the Kerka Valley.<sup>93</sup> Only a handful of stray bronze articles represent this period in neighbouring south-eastern Styria.<sup>94</sup> At the same time, the pollen record from Seibersdorf indicates agricultural activity in the area.<sup>95</sup>

<sup>89</sup> Horváth, L.: Spätbronzezeit. In: *Sieben Jahrtausende*, 37–38, Abb. 7–8; *idem* (1994b) 219, Figs 1–2; *idem*: Késő bronzkor [The Late Bronze Age]. In: *Évezredek üzenete*, 57–66; H. Simon–Horváth (1999); Horváth (2000) 13; Száraz (2002a) 520–521, Fig. 6. 3–5, Fig. 7. 1–2; cp. also Kiss–Kulcsár in this volume (p. 113).

<sup>90</sup> Horváth (1994a) 98, Fig. 9; *idem* (1994b) 219, Figs 4–6; Szőke–Vándor (1994) 6; Szőke (1995) 23–24.

<sup>91</sup> Horváth (2000) 13; Horváth, L. – Frankovics, T. (eds.): *Régészeti feltárások az M7–M70 autópálya tervezett nyomvonalán. Összefoglaló jelentés az 1999–2003-ban végzett feltárásokról* Excavations along the planned line of the M7–M0 motorway. Report on the investigations between 1999 and 2003]. Zalaegerszeg 2004.

<sup>92</sup> Müller (1971) 15, 78; Kőszegi (1988) 167.

<sup>93</sup> Bánffy (1998) 12, 15; Lippert (1999) 345, Karte 2; Bánffy (1999) Tab. 5.

<sup>94</sup> Lippert (1999) 345, Karte 2, Tab. 3.

<sup>95</sup> Wick, L. – Drescher-Schneider, R.: Vegetation history and human activity near Seibersdorf, Steiermark, Austria. In: *Pollenanalytische Daten*, 378–379; Draxler, I. – Lippert, A.: Die Siedlungsgeschichte im Mur- und Raabgebiet an-

The pollen sequence from Pötréte indicates intensive human activity in the area from 1370–1300 BC, corresponding to the late Tumulus–early Urnfield period (RB D–Ha A1). The evidence for arable farming suggests that similarly to other regions of the Carpathian Basin, various cereals were the main commodities traded for the raw materials needed for the manufacture of bronze tools and implements, as well as for finished bronze products. Even though the pollen data indicate the one-time existence of a larger settlement near the sampling location at Pötréte, only a handful of burials are known from the area around the Pötréte fishponds (six inurned burials from Hahót–Vadaskert; an inurned and a scattered cremation burial from Magyarszentmiklós–Újréti-dűlő, with the inurned burial yielding a pair of spiral bronze armrings;<sup>96</sup> Fig. 4. 2) in addition to the stray finds from Pusztaszentlászló.<sup>97</sup> The graves uncovered a little farther away at Garabonc–Ófalu, Petőhenye and Nagykanizsa–Alsóerdő date from the same period.<sup>98</sup> A refuse pit excavated at Magyarszentmiklós–Újréti-dűlő yielded appliqué decorated vessels of the early Urnfield culture and a mould for casting spiral jewellery. Settlement remains have been reported from Tófej–Brick factory, Zalakoppány, Zalaszentmihály and Szepetnek–Gyótapuszta.<sup>99</sup> The material from the larger settlement investigated at Nagykanizsa–Inkey-kápolna included the typical pottery wares of the period, pins with decorated heads and a mould for a socketed axe. A sunken house measuring 9.5 m by 5.5 m with wattle and daub walls and several storage pits for storing cereals were excavated at the site, reflecting the importance of cereal cultivation. Evidence for above ground residential buildings was also uncovered.<sup>100</sup> Stray finds indicating settlements are known from several sites: Becsehely, Esztergnye–Kisréti-dűlő, Homokkomárom–Homokbánya, Magyarszerdahely–Kardoskúti-dűlő, Miklósfa–Liszó junction, Miklósfa–Mórichely fishponds, Nagybakónak–Antalhegy, Nagybakónak–Dávori alj, Nagybakónak–Ugora-dűlő, Nagykanizsa–Alsóerdő, Nagyrécsce–Kisrécscei kertek, Nagyrécsce–Pusztaszentegyházi-dűlő, Szepetnek–Czerinkai-dűlő, Szepetnek–Kispityer, Szepetnek–Kisszepetneki-dűlő, and Újudvar–Külső Ádám-rét.<sup>101</sup> Other stray finds include the bronze knife and spearhead from Nagykanizsa–Felsőnyíresi-erdő, Nagykapornak and Nemesetés, a sickle from Hahót, bronze neckrings and armrings, as well as bronze lumps from Söjtör, a bronze dagger from Zalaapáti, and a Riegsee type sword from Zalacsány.<sup>102</sup>

The larger settlement of about fifteen to twenty houses at Nagykanizsa–Bilkei-dűlő dates from a slightly later period (a house section and several pits were uncovered at this site), as does the later part of the Gelsesziget–Homoksziget site, where various settlement features were excavated (Ha A1).<sup>103</sup> Other settlements have been identified at Nagybakónak–Pusztadűlő, Nagykanizsa–Sánc, Nagykanizsa–Magyar Street, and Szepetnek–Középtábla-dűlő.<sup>104</sup>

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hand neuer pollenanalytischer Untersuchungen und einer archäologischen Bestandsaufnahme. In: *Pollenanalytische Daten*, 394. Tab. 10; *Drescher-Schneider – Wick* (2001) 18–20: 2. Kulturphase, Mittlere Bronzezeit, 1504–1314 BC. Systematic investigations in Styria will undoubtedly enrich our knowledge of the Tumulus culture in this region (Georg Tiefengraber's kind personal communication as a member of the "Arbeitskreis Mittelbronzezeit").

<sup>96</sup> *Horváth* (1994a) 100; *Szöke-Vándor* (1994) 7; *Szöke* (1995) 24.

<sup>97</sup> *Kőszegi* (1988) 175.

<sup>98</sup> *Patek* (1968) 60, Pl. XCIII. 1–5; *Kőszegi* (1988) 163, 171; *Horváth* (1994a) 101; *idem* (2000) 13; *Szárász* (2002b) 10, 18–19.

<sup>99</sup> *Korek* (1960) 69; *Kőszegi* (1988) 191, 197, 198; *Horváth* (1994a) 102.

<sup>100</sup> *Ibidem* 100, Fig. 10.

<sup>101</sup> *Kőszegi* (1988) 125; *Horváth* (1994a) 102–103, Fig. 11; *Szöke* (1995) Pl. 4.

<sup>102</sup> *Patek* (1968) 56, Pl. XCIII. 9; *Kőszegi* (1988) 143, 163, 164, 166, 181, 196; *Horváth* (1994a) 102.

<sup>103</sup> *Ibidem* 100; *Szöke-Vándor* (1994) 7; *Horváth* (2000) 13.

<sup>104</sup> *Idem* (1994a) 100, 102–103, Fig. 11.

A little to the west, settlements of the RB D–Ha A1 period were identified near Becsvölgye and Petrikeresztúr during field surveys,<sup>105</sup> as well as at Nemesnép–Harmadik-dűlő, Zalabaksa–Belterület and Zalabaksa–Győrfa in the Kerka Valley.<sup>106</sup>

A considerably denser settlement network can be noted during this period in neighbouring south-eastern Styria too.<sup>107</sup> Irena Šavel linked the pottery brought to light at Oloris near Dolnji Lakoš in north-eastern Slovenia to the finds from Balatonmagyaród and the wares of the Virovitica group in western Croatia, noting that the first settlement level of the Gornja Radgona site represented a later period.<sup>108</sup>

The end of the early Urnfield phase is marked by the Kurd type hoards, such as the one from the fortified settlement at Pölöske<sup>109</sup> and the one found during peat-cutting at Pötréte.<sup>110</sup>

The finds of the later Urnfield phase (Ha A2–B; *Fig. 4. 2*) include the inurned burial from Gelsesziget–Vasúti őrház,<sup>111</sup> and the pits uncovered at Hahót–Vadaskert<sup>112</sup> and Magyarszerdahely–Homoki-dűlő.<sup>113</sup> The sites at Kemendollár–Várdomb<sup>114</sup> and Zalaszentiván–Kisfaludi-hegy<sup>115</sup> represent the fortified hilltop settlements of this population. Several hilltop settlements of the Ha B period are known from south-eastern Styria (e.g. Riegersburg).<sup>116</sup> The later Urnfield settlements in Slovenia, such as the later layer of the Gornja Radgona site, are generally associated with the Ruše group. Life on the Ormož settlement, an excellent example of proto-urban development heralding the Early Iron Age, began at roughly this time.<sup>117</sup>

It is clear from the above that the cultural contacts of the Hahót Basin changed repeatedly during the Copper and Bronze Age: cultural impacts from the Balkanic and Adriatic world shaped development during certain periods, while in others, influences from the Alpine and Danubian region were stronger.

<sup>105</sup> Müller (1971) 21, 41, 79, Map 3, Pl. V. 1, 3, 5–6; *Köszegi* (1988) 125, 171.

<sup>106</sup> Bánffy (1998) 15; Lippert (1999) 346, Karte 3; Bánffy (1999) Tab. 5.

<sup>107</sup> Lippert (1999) 346, Karte 3, Tab. 3.

<sup>108</sup> Šavel (1996) 15–16, T. 12–17; cp. also Honti, Sz.: Az urnenezős kultúra Dél-Somogyban [The Urnfield Culture in South-Somogy]. In: *Népek a Mura mentén 1 – Völker an der Mur 1*. Ed. by J. Balažić and L. Vándor. Murska Sobotá–Zalaegerszeg 1996, 45–47.

<sup>109</sup> *Mozsolics, A.*: Bronzefunde aus Ungarn. Depotfundhorizonte von Aranyos, Kurd und Gyermely. Budapest 1985, Taf. 124–128; *Köszegi* (1988) 175.

<sup>110</sup> Müller, R.: A pötrétei későbronzkori kincslet [Der spätbronzezeitliche Schatzfund von Pötréte]. *VMMK* 13 (1978) 59–73; *Köszegi* (1988) 175; *Szőke* (1995) 24.

<sup>111</sup> Horváth (1994a) 102.

<sup>112</sup> *Szőke–Vándor* (1994) 7, Fig. 4.

<sup>113</sup> *Köszegi* (1988) 158; Horváth (1994a) 102; *Szőke* (1995) 24.

<sup>114</sup> Nováki, Gy.: A kemendi vár [Kemend castle]. In: *A Göcseji Múzeum jubileumi emlékkönyve 1950–1960*. Ed. by I. Szentmihályi. Zalaegerszeg 1960, 97–106; *Köszegi* (1988) 148.

<sup>115</sup> Nováki, Gy.: Zur Frage der sog. „Brandwalle“ in Ungarn. *ActaArchHung* 16 (1964) 120–131; *Köszegi* (1988) 198; Száraz (2002a) 521–528, 532–533, Figs 8–11.

<sup>116</sup> Hebert, B. – Lehner, M. – Schmidt, W. E.: Der „Kranzlgarten“ als Geschichtsquelle. Ergebnisse einer archäologischen Untersuchung auf der Riegersburg. *Mitteilungsblatt der Korrespondenten der Historischen Landeskommission für Steiermark* 4 (1991) 204, Abb. 7, 35–36; Lippert (1999) 346, Karte 3; *idem*: Zur Urnenfelder- und eisenzeitlichen Besiedlung der Landschaft zwischen Mur und Raab. In: *Die Drau-, Mur- und Raab-Region*, 50–52, Taf. 1.

<sup>117</sup> Šavel (1996) 16, 20, T. 18–20; Teržan, B.: An Outline of the Urnfield Culture Period in Slovenija. *Arheološki Vestnik* 50 (1999) 97–143; Lamut, B.: Ormož – The Chronological Structure of the Late Bronze Age and Early Iron Age Settlement. In: *Die Drau-, Mur- und Raab-Region*, 207–242. For the Early Iron Age development of the region, cp. Horváth (1994a) 104; Šavel, I.: The region of Pomurje in the Iron Age. In: *Die Drau-, Mur- und Raab-Region*, 67–76; Teržan, B.: Die spätbronze- und früheisenzeitlichen Besiedlung im nordöstlichen Slowenien. Ein Überblick. In: *Die Drau-, Mur- und Raab-Region*, 125–135; Metzner-Nebelsick, C.: „Thrako-kimmerische“ Fundkomplexe zwischen der Südoststeiermark, Südwest-Transdanubien und Nordkroatien und ihre Bedeutung für die Kulturentwicklung während der frühen Eisenzeit. In: *Die Drau-, Mur- und Raab-Region*, 137–154.