

A UNIQUE SOUTHEASTERN VESSEL TYPE FROM EARLY CHALCOLITHIC TRANSDANUBIA: DATA ON THE “WESTERN ROUTE”

CHRONOLOGICAL FRAMEWORK

There are two starting points when dealing with connections between the Vinča culture and different phases of the Neolithic and Chalcolithic in Transdanubia (western Hungary). On the one hand, the western part of the Carpathian Basin is considered to be at least one of the key areas for mediating neolithic cultural impulses to Central Europe. On the other hand, there is evidence that the Vinča sphere of influence determined the whole neolithic development of a large area in the Mid-Balkans. Thus, it is no wonder that contacts between the two regions have been analysed in numerous studies. These contacts can be demonstrated repeatedly for various phases of the Neolithic, actually each time along very similar geographic routes, as we shall see later. While in some of these periods the network of communication is satisfactorily clear, some of them are still problematic. Here, I wish to focus attention on a less well understood period. This is the end of the Vinča culture which has connections with to the latest phase of the Lengyel culture. In absolute terms, it dates to about 4300 BC. The presentation of a unique find group, found in southwestern Transdanubia from this period may help in the reconsideration of old and new data concerning Balkan-Aegean trade routes and cultural contacts with western Transdanubia. These routes may have played an important part in the process of “chalcolithisation” i.e. the spread of Chalcolithic inventions; even on into Central Europe as well. (*Fig. 1.*)

In the last few years it became increasingly clear that there was no chronological or cultural gap after the long-lived Lengyel culture. Rather the development can be characterised by a peaceful continuity in the lifeways of the local population, which came to be more and more influenced by cultural contacts and probably also related to the appearance of smaller groups from southeastern regions which infiltrated into the region. The first wave of Balkan cultural phenomena first impacted the latest Lengyel population! For this study, I have chosen the unique vessel type presented here as a vehicle for following the routes of influence, using a method of seeking parallel pieces: a cross-checking within synchronous and diachronous cultures.

Concerning the impact of the Vinča culture on contemporary Transdanubian peoples, two, more-or-less, well researched periods provide a *terminus post quem*. First, the transition between the final, Spiraloid B phase of the Starčevo culture, as well as the Vinča A phase and the earliest Linearbandkeramik has been thoroughly analyzed and discussed.

Similarly, another stronger wave of Vinča influence reached Transdanubia, especially its eastern part, during the Vinča C period. It most probably played an important role in the formation of the Zseliz and Sopot-Bicske types into the early Sé-Lengyel I culture or Lužianky in the North. This period, the Sopot, Bicske and the earliest Lengyel culture is again discussed in detail.

The next period with widely known southeastern elements can be dated to immediately after the dissolution of the Vinča D2 culture. This horizon, called Middle Chalcolithic in Hungarian terms, can be characterised by the early Bodrogkeresztúr (A) and classical Sălcuța (III) phases in the eastern and southern parts of Transdanubia, as well as the widely extended Lasinja circle in western Croatia, Slovenia, southeastern Austria, called the Kanzianiberg group, as well as the Bisamberg-Oberpullendorf group in Lower Austria. In Transdanubia, a very similar formation is called the Balaton-Lasinja culture. This period is not only a *terminus ante quem* for Vinča development but also for the time period in Transdanubia under discussion here.

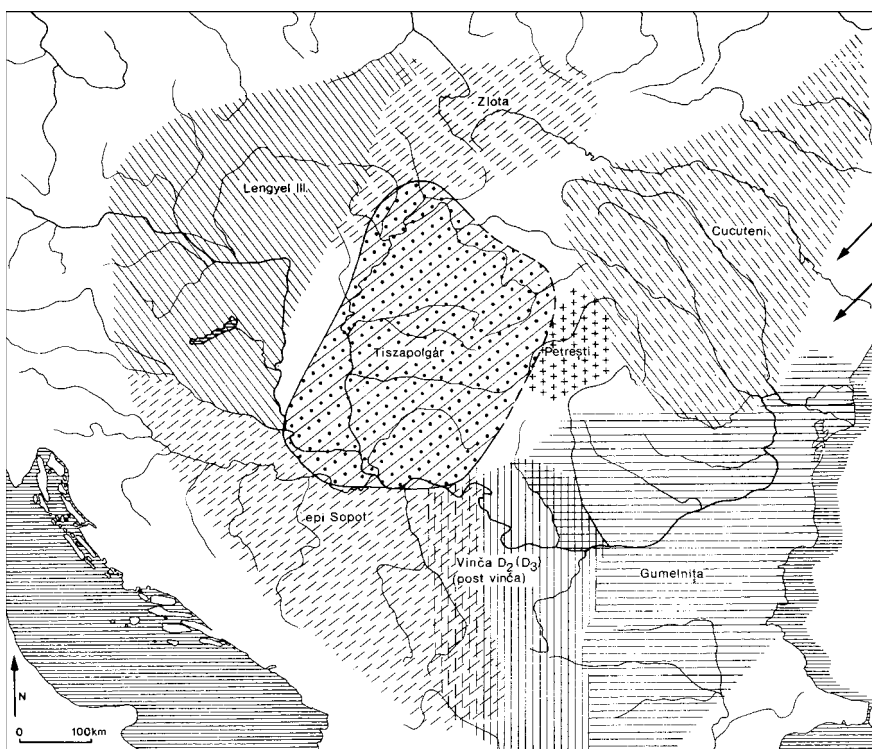


Fig. 1. The distribution of the latest phase of the Lengyel culture and its neighbouring cultures

The time period between these two entities, the late Neolithic and the earliest Chalcolithic, is filled by the long-lasting Lengyel culture. Although this culture extended over a large territory from southwestern Hungary to Moravia and Little Poland, the early and the white painted pottery types are fairly uniform both in the eastern (Lengyel) and the western, Moravian Painted Ware cultural sphere. However, in its last, so-called unpainted phase we find much stronger differences. These differences may have been basically caused by the decreasing intensity of Mid-Balkan cultural contacts towards the northern and eastern areas of the Lengyel culture. Recently, I have elsewhere attempted to demonstrate that the names of cultures which evolved on Lengyel soil, such as Ludanice or Balaton-Lásinja, are nothing but reflections of the larger or smaller proportion of Balkan contacts with the surviving Lengyel population.¹ Certainly, it was precisely the strongest impulses which reached the southern borders of the huge Lengyel sphere of influence, namely, southern and southwestern Transdanubia.

These effects, as has already been noted, did not begin with the Balaton-Lásinja culture, but somewhat earlier, in the latest phase of the Lengyel culture.

NEW DATA ON THE EARLY CHALCOLITHIC (FINAL) PHASE OF THE LENGYEL CULTURE

In the last few years, two microregional projects and a number of other sites from this latest phase of the Lengyel culture have been excavated in County Zala. Meanwhile, similar sites were published from the Slovenian Murska Sobota district, Bukovnica,² located quite close to our microregional study area, and also from County Vas, some kilometres northwards.³ On these settlements we have all found the late, so-

¹ BÁNFFY 1994; BÁNFFY 1996b.

³ KÁROLYI 1992.

² ŠAVAL 1992.

called *unpainted phase* of the Lengyel culture, which is, in fact, not quite unpainted, since on rare occasions, some traces of monochrome crusted red paint occur. On the basis of my own results in Balatonmagyaród and Zalaszentbalázs, I set up two clusters of characteristics. The first pattern reflects the traditional Lengyel forms of the pottery, while new elements are grouped in the second one.

We find, as a leading form throughout the whole Lengyel culture, profiled bowls with everted rims in traditional Lengyel ware. (*Fig. 2*) Two distinct subtypes of pots can be observed: one with an everted rim and occasionally some knobs on the belly, and the so-called butt-shaped pots, again a long-lasting, traditional form. Vase-shaped vessels appear, sometimes with quite thin necks. Almost each type of the normal pottery can be found among the small-sized vessels. These vessels were quite often painted in the early Lengyel phases. Perhaps this is why most of the pottery of this type uncovered at Zalaszentbalázs exhibit traces of monochrome red paint. The hemispherical clay spoons with shaft-holes were present throughout the culture while strainers, human figurines, animal figures and small clay altarpieces represent the small finds. The number of altarpieces, 13 alone from Zalaszentbalázs, is extremely high, especially for a late Lengyel context.

Among the newly appearing forms the following can briefly be noted:

The new, foreign ware in the late Lengyel assemblage (*Fig. 3*) that is believed to be of southern origin can be divided into two groups: 1) those wares present in Central Transdanubian late Lengyel assemblages (Veszprém, Tekenyé)⁴ and 2) those wares appearing in the southwestern border area only. I must confess that earlier, in a summary work, I was inclined to consider that there was a diachronic sequence between the two characteristics.⁵ On the basis of latest evidence, it seems likely that the two subtypes appear in two complementary regions, i.e. in central and southwestern Transdanubia. Therefore, I cannot exclude that the Zalaszentbalázs type material represents the final Lengyel phase in southwestern Hungary. In other words, it is possibly a geographic, rather than a chronological phenomenon.

1. The first, central Transdanubian group includes vessels with slightly bell-shaped pedestals, the coarse egg-shaped pots with thick walls, and the storage vessels with cylindrical necks and impressed rims. The biconical bowls and mugs that belong here have no sharp joins and have slightly concave walls.

2. Besides the vessels mentioned above, the Zalaszentbalázs group can be characterised by the use of large bowls with spouts, conical bowls with thickened rims, and biconical bowls with sharp joins below the rims. These latter bowls are markedly different from the biconical bowls that had appeared in Austria during the preceding phase. While the Austrian bowls are always concave below the rim, the Late Lengyel bowls have quasi-convex bodies. Some of the conical bowls have peculiarly thickened vertical protrusions or triangular warts on their rim. The tubular supports are either slightly bell-shaped or have a conical thick-set form. The latter often have two pierced round holes in them, which makes them similar to the early Chalcolithic pedestals prevalent in Eastern Hungary. The smaller rim fragments with handles most probably come from jugs, but we are not yet able to determine whether these jugs had one or two handles. This group also includes black polished graphite covered vessels, which were clearly local products, as pieces of raw graphite were found in the fill of a pit near the place where this black polished ware came to light. Apart from these types, there is a group comprising some small, oval or slightly ellipsoid mouthed vessels, with two longish, perforated vertical handles running down their sides: this short study is devoted to this type, earlier unknown in any Lengyel culture ceramic context.

CONNECTIONS FROM THE MID-BALKANS TO THE UPPER DANUBE BASIN: THE "WESTERN ROUTE"

All these characteristics, enumerated in section 2 appear in a traditional Lengyel environment. These sites have a typical neolithic settlement structure and stone industry.⁶ The best parallels to the newly appearing features should evidently be sought in the southeast: the Sopot-III-Vinča D2 substratum, which

⁴ RACZKY 1974; H. SIMON 1987.

⁵ BÁNFFY 1996b.

⁶ BÁNFFY 1994; T. BIRÓ 1996.

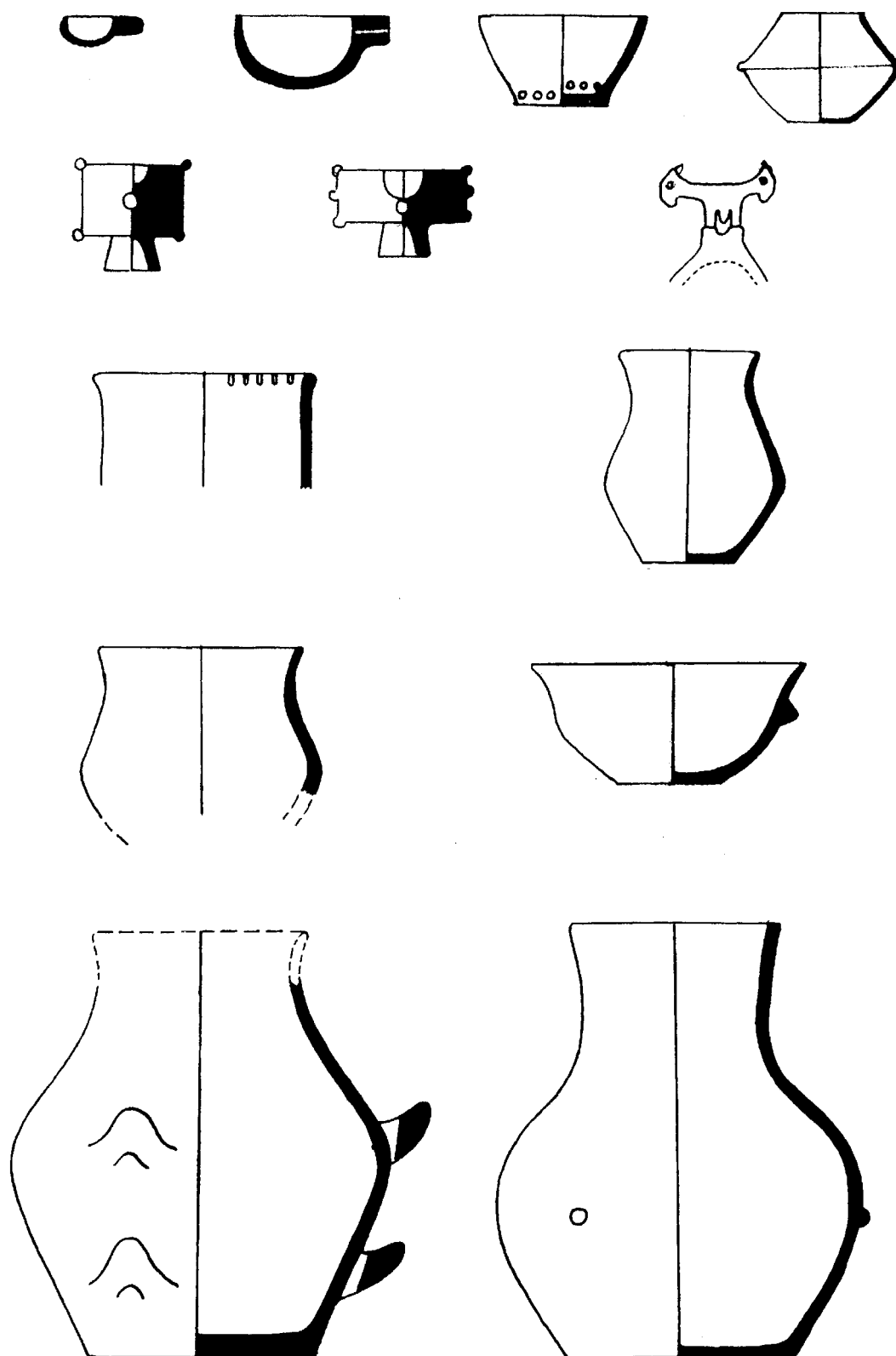


Fig. 2. Traditional Lengyel pottery characteristic of the latest phase

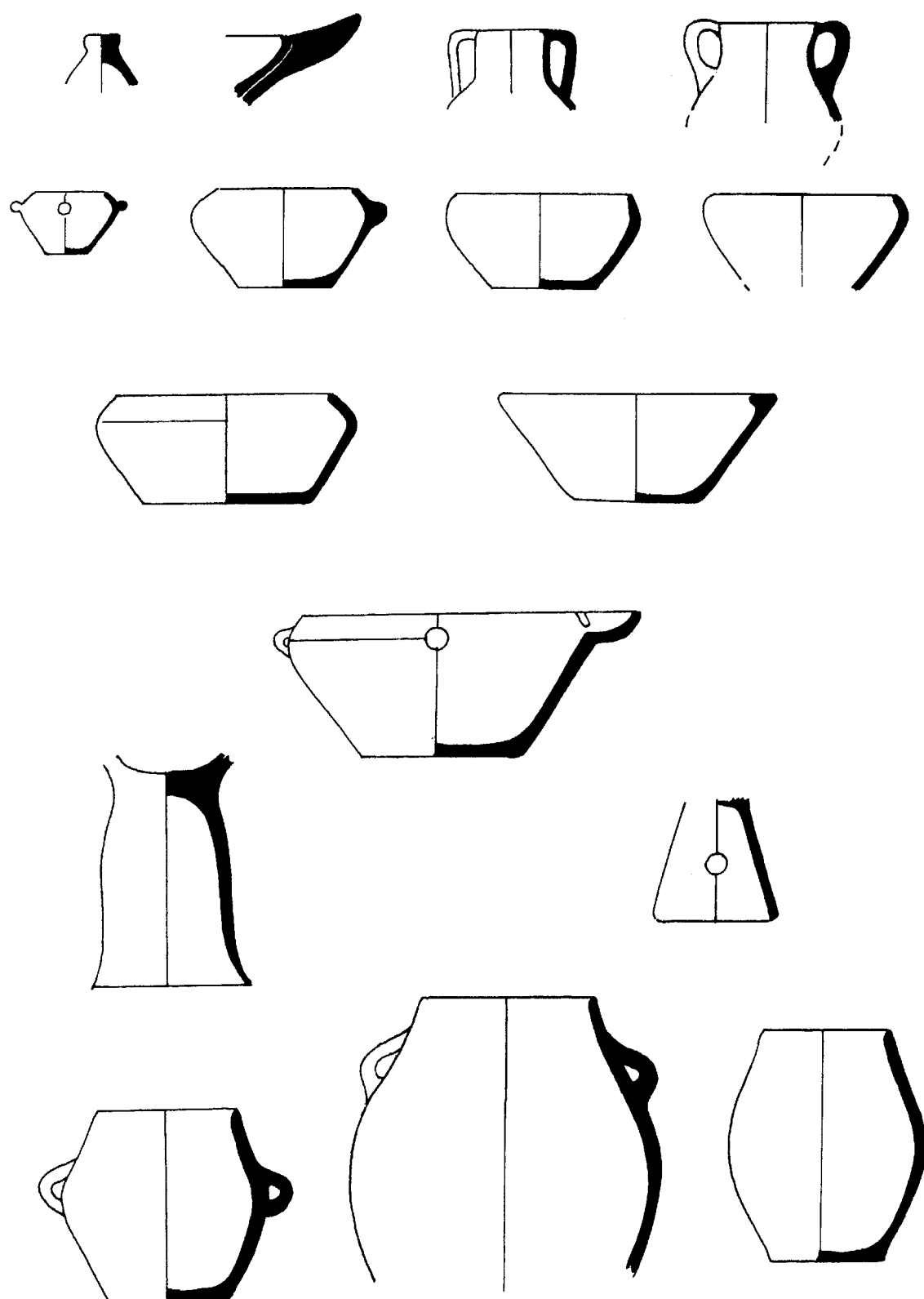


Fig. 3. New, Balkan elements from the latest phase of the Lengyel culture in southwestern Transdanubia

is not only coeval with the final phase of the Transdanubian Lengyel culture, but which also had proven contacts with all these groups.⁷

However, more exact research into these contacts is still problematic. Namely, it is well known that the final, D2 phase as well as the end of the Vinča culture still need to be clarified in the research on the culture. In contrast to the large Vinča distribution during the heyday of the culture (i.e. Vinča C), the few sites of the D2 phase are restricted to a small area in Vojvodina: Gomolava, Vinča, Obrež-Beletinci.⁸ There is also the hypothetical D3 phase, suggested by Bogdanović on the basis of the Divostin sequence.⁹ This phase and pottery type has generally not been accepted as an individual period.¹⁰ Still, the few traces of the D2 level contain pottery types which are strikingly similar to our final Lengyel pottery. At the site of Gomolava, the stratum of the “aeneolithic humus” i.e. Gomolava II covers, i.e. was found right above, a C-D1 phase level. Thus, it could be identified with the Vinča D2 period.¹¹ The same Vinča D2 material was published from Obrež-Beletinci.¹²

The site of Bapska was the first to yield material which demonstrated how far west the Vinča influence extended. Here, the late Vinča (D1) people settled above a Sopot stratum.¹³ More recently, some new assemblages have been published from eastern Slavonia and the Srem region, which display the characteristics of the late Vinča, especially Sopot II and III, and also late Lengyel ware. Such sites include Grabovac and Kneževi Vinogradi.¹⁴ A similar sequence of late Sopot-Lengyel levels covered by a Lasinja occupation has been reconstructed by N. Tasić in Gradina-Bosut. He also noted that the Bosut sequence is a good example of late Sopot-Lengyel and Vinča connections in the early Copper Age Slavonia and Srem, while he also considers it to be important that the traces of Lasinja settlement immediately followed the latest Sopot-Lengyel features, without any break.¹⁵ Tasić identified the Bosut finds as belonging to the late Sopot III–unpainted Lengyel “degenerierte Phase” (degenerate phase), which marked the pre-Chalcolithic transition period.¹⁶ According to N. Tasić, this phase was characterised by the spread of Vinča D2 toward the northwest as far as Bapska, and also by the spread of the late Sopot-Lengyel culture toward eastern Srem. In my opinion, the Bosut stratification, which proves the continuity of the Lengyel-Balaton-Lasinja cultures and the phenomena I have discovered in southern Transdanubia mutually support each other.

Finally, Z. Marković drew attention to the phenomenon of the mixed pottery features he found at his site, Seče.¹⁷ According to him, the Seče group consists of at least six other sites with the same material from northwest Croatia and Slovenia, in the Mur-Drava and Sava midlands, like Krč-Beketinec.¹⁸ Marković also collected similar elements, constructing an early Chalcolithic horizon from the Vinča D2, the Prototiszapolgár, the Nitra-Brodzany phase of the Lengyel culture and the late Moravian Painted Ware cultures.¹⁹ This horizon is seemingly earlier than the Lasinja-Balaton-Bodrogkeresztúr phases. Among Slovenian publications we find the same late mixed Sopot-Lengyel assemblages, such as Andreinci in Slovenske Gorice²⁰ and Bukovnica, already mentioned above.²¹ This horizon is sometimes called “Proto-Lasinja” by the excavators, as a sign that these connections can somehow be considered as an avantgard, an outpost of the immediately following Middle Chalcolithic Lasinja horizon. In terms of the above types, Zalaszentbalázs could well be considered as belonging to the same time horizon. This name also fits the pottery of Kisunyom, Újperint in western Hungary.²² Actually, the content of the MOG IIa phase, and the expression “Epi-Lengyel” is no different from “Proto-Lasinja”, as E. Ruttkay rightly pointed out.²³ The sites of Ste-

⁷ BRUKNER 1968, 78–80; BRUKNER 1969.

⁸ DIMITRIJEVIĆ 1971; BRUKNER 1980–81, 20.

⁹ BOGDANOVIĆ 1990, 105.

¹⁰ JOVANOVIĆ 1992–93, 8–9.

¹¹ BRUKNER 1980–81, Fig. 4–5.

¹² BRUKNER 1962.

¹³ BRUKNER–JOVANOVIĆ–TASIĆ 1974, 102; DIMITRIJEVIĆ 1979, 283–284.

¹⁴ SIMIĆ 1987; HOMEN 1987.

¹⁵ TASIĆ 1986, 51–52.

¹⁶ TASIĆ 1986, 52.

¹⁷ MARKOVIĆ 1985.

¹⁸ MARKOVIĆ 1980.

¹⁹ MARKOVIĆ 1985, 28–32.

²⁰ PAHIĆ 1976, 82–83, Pl. 1–6.

²¹ ŠAVEL 1992.

²² KÁROLYI 1992.

²³ RUTTKAY 1976; RUTTKAY 1983; RUTTKAY 1983–84; RUTTKAY 1993, 161–162.

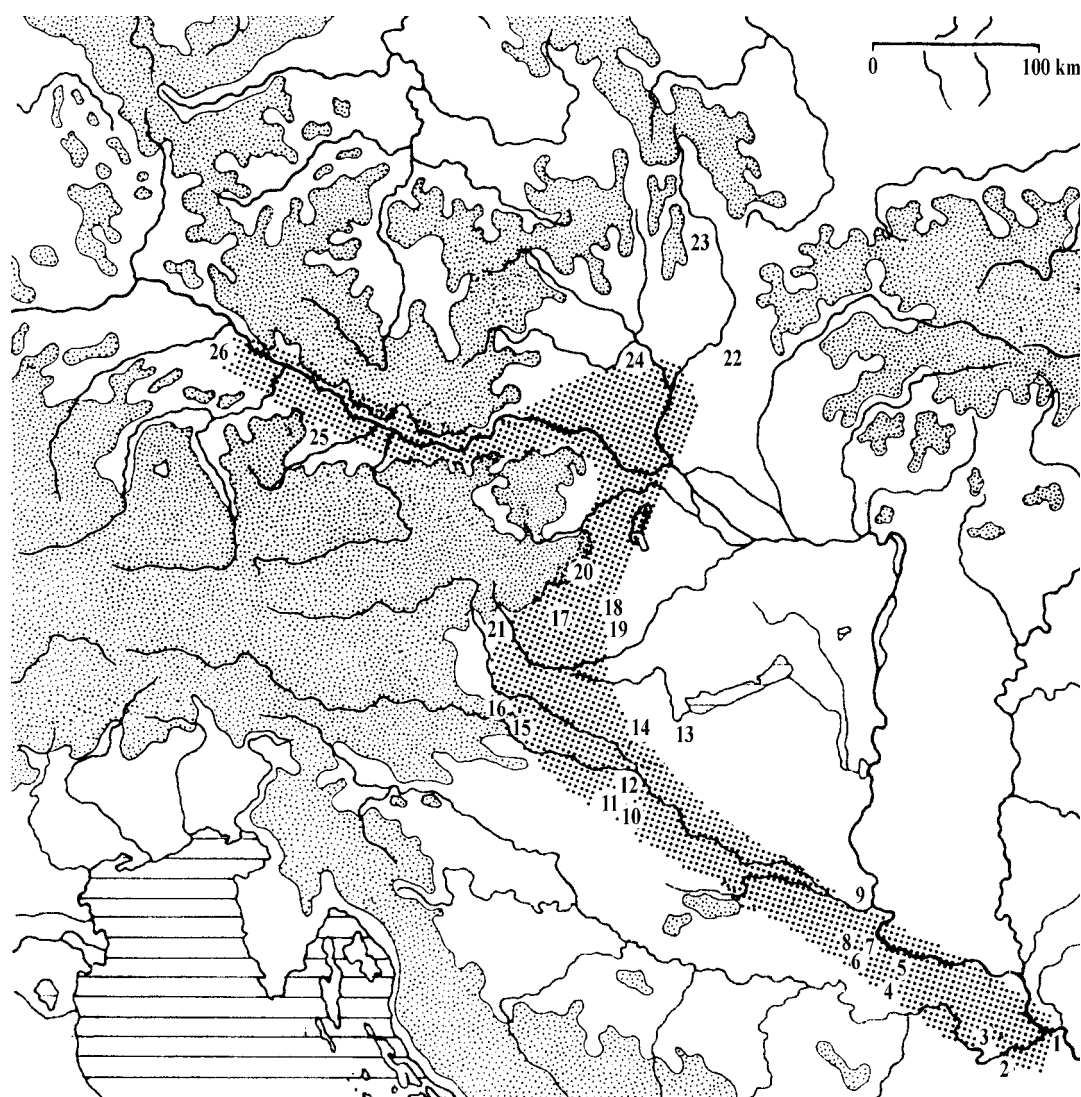


Fig. 4. The trade and cultural route through western Transdanubia in about 4300 BC.

1. Vinča; 2. Obrež-Beletinci; 3. Gomolava; 4. Gradina-Bosut; 5. Bapska; 6. Vinkovci; 7. Vukovar; 8. Sopot; 9. Kneževi Vinogradi; 10. Grabrovac; 11. Krč-Beketinec; 12. Seče; 13. Balatonmagyaród-Hídvépuszta; 14. Zalaszentbalázs-Szőlőhegyi mező; 15. Bukovnica; 16. Andrenci; 17. Stegersbach; 18. Újperint; 19. Kisunyom; 20. Oberpullendorf; 21. Raababerg; 22. Uherský Brod; 23. Olomouc/Unicov; 24. Dolni Vestonice; 25. Ossarn; 26. Wallerfing

gersbach,²⁴ Raababerg,²⁵ Oberpullendorf, Schleibach, Wurnitz and finally the late Lengyel complex of Ossarn can be mentioned here as part of this latter district.²⁶

As to Moravia, P. Kostuřik assigns the bulk of the finds discovered at the site of Unicov/Olomouc to Phase IIb of the Moravian painted culture, i.e., to the Early Chalcolithic. The assemblage from Uherský Brod in eastern Moravia has the same date.²⁷

²⁴ SÜSS 1969.

²⁵ OBEREDER 1989.

²⁶ I was also able to have a glimpse at the finds through the courtesy of E. Ruttkay to whom I wish to express my gratitude

here. I am also grateful for her continual discussion and improvement of my work.

²⁷ PAVELČIK 1974.

We have several objects dating from the earliest phase of the Jordanow culture at our disposal that show this culture's southeastern associations. During his discussion of the neolithic site at Dolni Vestonice, I. Rakovsky says that its associations are more marked with the Balaton-Lásinja culture in Lower Austria and western Transdanubia than with the Ludanice culture in neighbouring western Slovakia.²⁸ This opinion appears to support the view voiced by N. Kalicz and again by E. Ruttkay, that the Bavarian, the Bisamberg-Oberpullendorf, and the Jordanow groups were parts of the same cultural complex in Moravia, in which the influence of the Balaton-Lásinja culture was predominant.²⁹

Following the regions and sites which have similar pottery types, from the Vinča tell and Gomolava to eastern Austria, a geographic route of cultural and trade contacts through Transdanubia appears. (*Fig. 4*)

THE "RÜSSELHENKEL" (ELEPHANT LUG) VESSEL TYPE AND ITS SOUTHEASTERN CONNECTIONS

After having sketched out the background, following coeval and similar assemblages from the nucleus area of the Vinča culture through Transdanubia and further on to Central European regions, I intend to complement our present knowledge with a discussion of a new vessel type from the latest Lengyel context. This type may sustain and confirm the existence of real trade and cultural contacts over even longer distances: not only starting in the Mid-Balkans but also from the Aegean to the western Carpathian Basin and on into Central Europe in the final centuries of the 5th Millennium.

This unique vessel form came to light in the latest Lengyel settlement known to date, found in Zalaszentbalázs.

This vessel is a rather small, thin-walled mug (*Fig. 5; Fig. 6*), actually a basic form that is also quite common in other contemporary cultures, e.g. in Tiszapolgár A and in Slovakian late Lengyel assemblages.³⁰ However, this vessel has two unique features. First, it has an oval or rather slightly ellipsoid-shaped mouth. Secondly, there are two small perforated knob-like handles on both narrow sides. The handles continue as vertical ribs right to the base. One vessel of this type could be reconstructed almost completely (*Fig. 6*): the rim may rise somewhat higher, but not more than one or 1.5 cm, since the vessel wall grows very thin near the handles.³¹ Apart from this example, four more fragments belonging to vessels of this type were found in Zalaszentbalázs (*Figs. 5.1, 3, 4*)³²; (*Fig. 5.2*).³³ Three of these finds came to light inside dwellings, the fourth and the fifth pieces comes from a refuse pit. The number of these finds indicates that this vessel cannot be considered a chance find, a mistake by the Zalaszentbalázs potter. Nevertheless, this mug also finds very good parallels beyond the already established Vinča connection area which deserves more attention.

In spite of all obligatory caution, these parallels should not be neglected. Namely, strikingly similar vessels are quite common in a chronologically close, but geographically more distant area. This vertical rib on the mug is called an "elephant lug" or even more commonly in the literature by the German expression "Rüsselhenkel". The rib has been described as occurring in a well-defined horizon in time and space. H.-J. Weisshaar describes the earliest level of the Rachmani culture, i.e. the oldest level in Pevkaria Magula, that of House 704, as the level which follows the Dimini layer immediately. This level is characterised by red slipped ware, late crusted ware, rolled rims, "Rüsselhenkel" and a small vessel with an oval cross-section.³⁴ (*Fig. 7.1-6*) Thus, this vessel type appears in this horizon, and continues to be used in later phases of the Rachmani culture.³⁵ The perforated vertical handles also appear in early Cycladic assemblages.³⁶ "Rüsselhenkel" vessels have earlier been published from Rini Magula and from Zerelia. They belong to the same horizon, appearing on the side of the Γ3γ type vessels³⁷ and also from pit "C" at Otzaki.³⁸ H. Hauptmann also mentions a small asymmetrical vessel with an oval cross-section from pit "C" that can be

²⁸ RAKOVSKY 1989, 61–63.

²⁹ KALICZ 1982; RUTTKAY 1985.

³⁰ KUTZIÁN 1963, in numerous graves and types c,d,e in the 123. (typological) plate; VLADÁR–LICHARDUS 1968.

³¹ BÁNFFY 1996a, Pl. 98, No. 168.

³² BÁNFFY 1996a, Pl. 108, Nos. 248–250.

³³ BONDÁR 1996, Pl. 66, No. 136.

³⁴ WEISSHAAR 1988, 57–60; WEISSHAAR 1991, 237.

³⁵ WEISSHAAR 1988, Pl. 133.

³⁶ GETZ-PREZIOSI 1977, Figs. 83–84.

³⁷ WACE–THOMPSON 1912, 131, Figs. 79/l, o, 101.

³⁸ HAUPTMANN 1981, 201, Fig. 46/9.

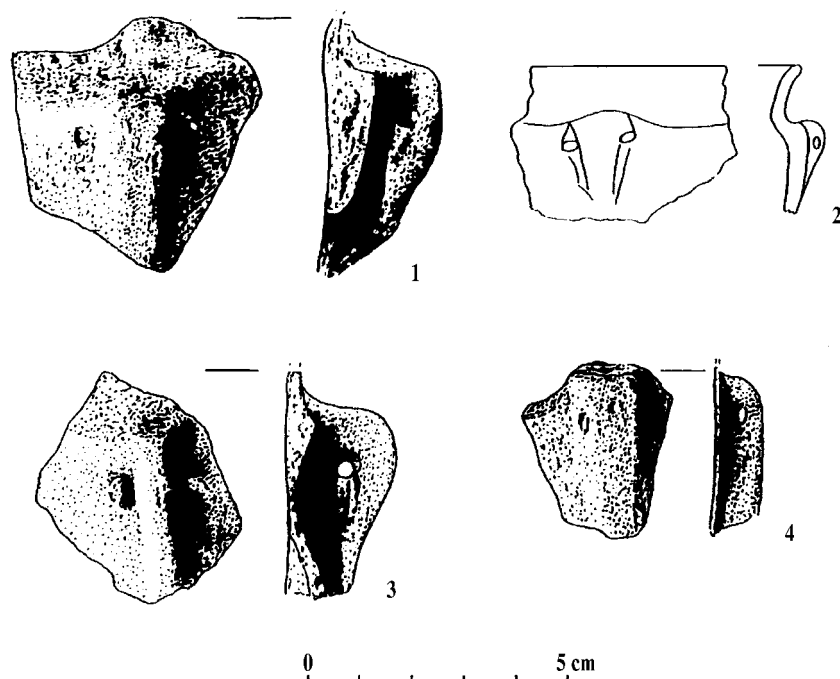


Fig. 5. "Rüsselhenkel", Zalaszentbalázs-Szőlőhegyi mező. 1, 3–4: Excavation by E. Bánffy; 2: Excavation by M. Bondár

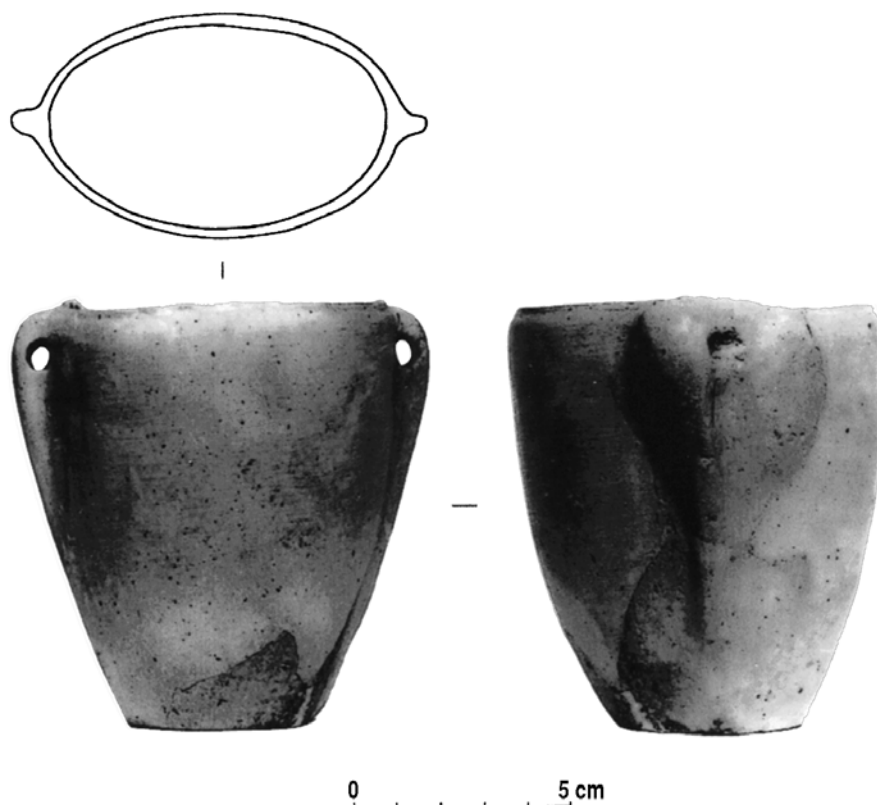


Fig. 6. "Rüsselhenkel", Zalaszentbalázs-Szőlőhegyi mező. Excavation by E. Bánffy

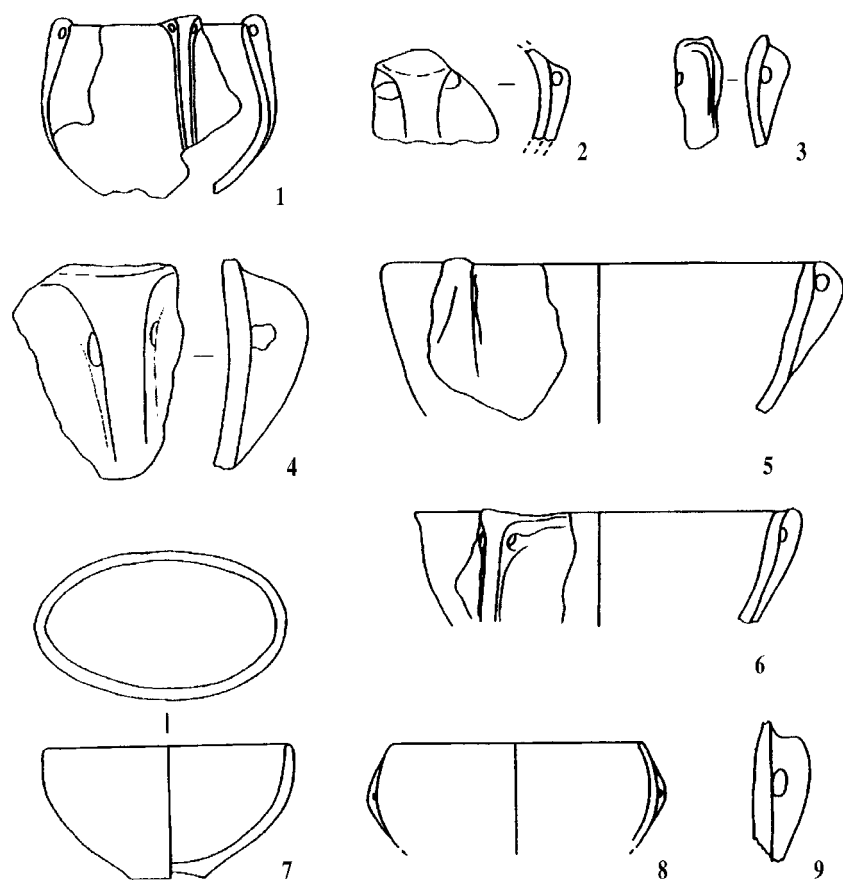


Fig. 7. "Rüsselhenkel" and a vessel with oval diameter.

1: Pevkakia Magula (after WEISSHAAR 1979, Fig. 2/1); 2–6: Pevkakia Magula (after WEISSHAAR 1988, Fig. 6/6, 6/8, 6/7, 7/2, 9/7, 9/11); 7: Maliq Ila (after KORKUTI 1996, Fig. 96/1); 8: Burimas II (after KORKUTI 1996, Fig. 92/10); 9: The Athenian Agora (after IMMERWAHR 1971, Fig. 69/196)

dated to the early Rachmani culture. Certainly, it is not only the vessel type discussed here that reflects the very close contacts between the early and medium phase of the Rachmani culture and the grave goods from Kephala at Keos.³⁹ It should also be noted that some of the so-called "scoops", asymmetrical rhyton-like cult vessels, also have oval or ellipsoid mouths.⁴⁰ Other "Rüsselhenkel" occur outside of the early Rachmani culture area, but still in the Aegean, such as the southern slope of the Akropolis,⁴¹ from Kephala⁴² and from the Athenian Agora.⁴³ (Fig. 7.9) This clearly defined horizon, first named by C. Renfrew⁴⁴ as the Attika-Kephala or Aegina-Agora group has been well described in two studies by A. Dousougli.⁴⁵ In concordance with Renfrew and Coleman,⁴⁶ Dousougli considers that this horizon marks a transitional period immediately after the Final Neolithic, but definitely before the beginning of Early Helladic. They date it to between 4300 and 4000 BC. She characterises this horizon by the use of red slip, sometimes red crusted paint, perforated pedestals, biconical ware. The "elephant lug" or "Rüsselhenkel" is mentioned as an especially important type.⁴⁷

³⁹ CASKEY 1964.

⁴⁰ HAUPTMANN 1981, Fig. 47/, 3, 4a, 5.

⁴¹ PLATON 1964, Fig. 25/2.

⁴² CASKEY 1964, Pl. 47/b,e; HAUPTMANN 1971; COLEMAN 1974; COLEMAN 1977, Fig. 31, 33, 43, 103.

⁴³ IMMERWAHR 1971, Nos. 126, 129, 196.

⁴⁴ RENFREW 1972.

⁴⁵ DOUSOUGLI 1987 and especially DOUSOUGLI 1992.

⁴⁶ COLEMAN 1974; COLEMAN 1977.

⁴⁷ DOUSOUGLI 1992, 276.

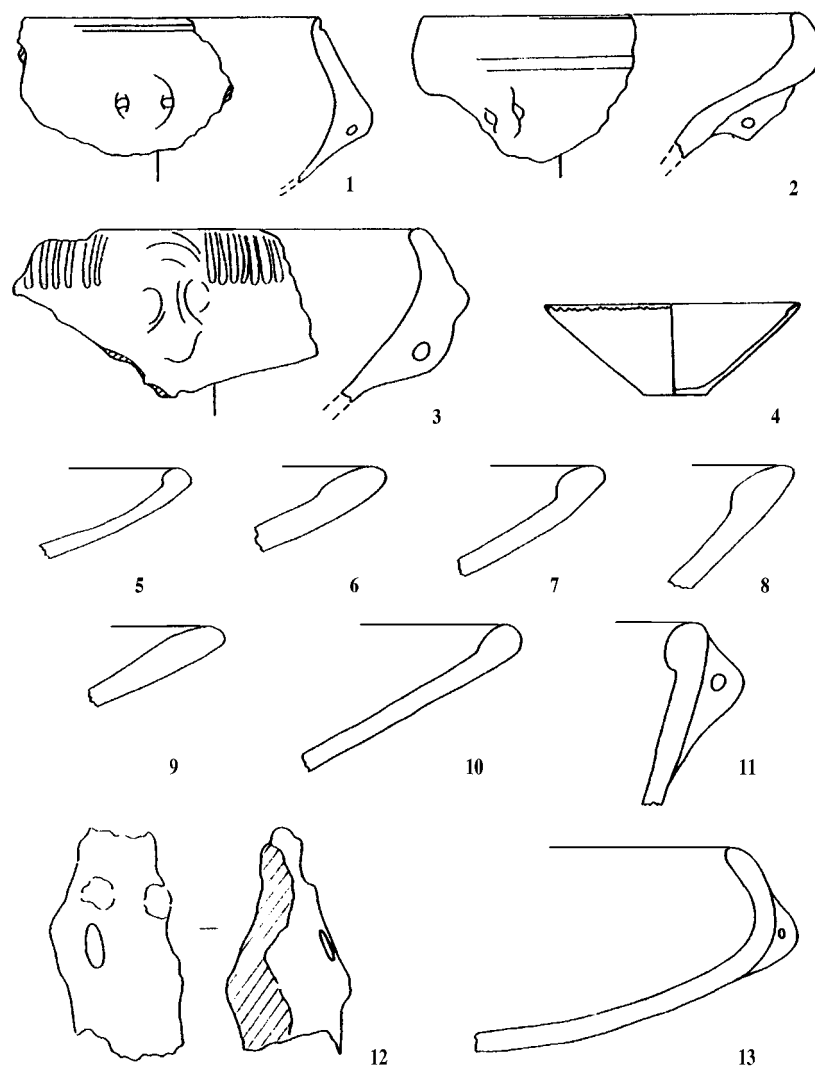


Fig. 8. "Rüsselhenkel" and rolled rims.

1–3: Crnobuki (after SIMOSKA-KITANOSKI-TODOROVIĆ 1976, Fig. 6/3, and Fig. 8, below, Fig. 10/1); 4: Sitagroi IIIa (after PARZINGER 1991, Fig. 4/14); 5–11, 13: Sălcuța II (after BERCIU 1966, Fig. 142/10, 107/4, 142/13, 142/7, 142/5, 107/1, 107/11, 107/9); 12: Vinča C2D (after VASIĆ 1936, Fig. 52, Nr. 241a–b)

The chronological connections between the Attika-Kephala culture and the Rachmani horizon became evident following some recent excavations. Ten years ago, research in the Zeus cave at Naxos yielded an exact stratigraphy from the Neolithic to historic periods. The excavator, K. Zachos, found that the oldest level contained crusted painted and black polished pottery. Above this level, the material of the Attika-Kephala group was found, with well established parallels to the early and middle layer of the Rachmani culture.⁴⁸ With the help of this chronological sequence, Zachos was able to distinguish three phases from a period which Weissshaar thought to be single whole: the Saliagos, Kephala and early Cycladic phases. This more exact chronological sequence may also provide a better basis for our cross-checking method with northern pottery types.

⁴⁸ PARZINGER 1991, 373–374; ALRAM-STERN 1996, 95–97.



Fig. 9. Early chalcolithic south east European sites mentioned.

1: Otzaki Magula; 2: Zerelia; 3: Rini Magula; 4: Pevkakia Magula; 5: Athinai, Acropolis; 6: Athinai, Agora; 7: Kephala; 8: Naxos; 9: Kum Tepe; 10: Sitagroi; 11: Kritsana; 12: Burimas; 13: Maliq; 14: Šuplevec; 15: Bakarno Gumno; 16: Crnobuki; 17: Bujanj Hum; 18: Krivodol; 19: Hodoni; 20: Zalaszentbalázs

This relative and absolute dating fits not only the lowest Rachmani layer, but to the earliest Chalcolithic of the middle Balkans and Carpathian Basin as well. It may also be apparent that besides their synchronous occurrence numerous features characterising the Attika-Kephala horizon, are also typical for the southwestern distribution area of the latest Lengyel culture. However, the parallels will remain useless if these two distant and as yet discrete points on the map cannot be connected to each other by contact finds, throwing a bridge between the two remote areas. Fortunately, the assemblages which show contacts are found in coeval contexts in the southern and central Balkans, as can be seen below.

Completing the contacts of this Thessalian and Aegean horizon, Kumtepe Ia on the Thracian coast, Kraitsano-typed pottery in Macedonia,⁴⁹ phase III with its graphite ware in Sitagroi⁵⁰ (Fig. 8.2) and, even more important from our present point of view, the Gumelnița-Kodžadermen-Karanovo VI period is defined as having clearly demonstrable contacts with other societies of the Balkan Chalcolithic. We can discover related features from the same horizon, directly north of the Attika-Kephala horizon, and even northwards from Thessaly.

The northern and northeastern connections between the early Rachmani culture and the Thracian-Macedonian region, represented by graphite ware and Thracian Galepsos pottery is shown by H.-J. Weisshaar.⁵¹ Now, let us take a look at the “Rüsselhenkel” type and also at other Balkan late Neolithic-early Chalcolithic features, like rolled rims, oval-ellipsoid mouths, biconical profile lines and graphite ware which is especially common both in Transdanubia and in Thessaly!⁵²

First, we should mention the Maliq IIA phase in Albania. After the preliminary descriptions of F. Prendi,⁵³ M. Korkuti provided a detailed analysis of this horizon,⁵⁴ and most recently in a thorough monograph.⁵⁵ Apart from the chronological horizon exactly described as fitting our early Chalcolithic, the latest phase of the Lengyel culture,⁵⁶ graphite pottery is mentioned as a type and technique coming from the Middle Balkans,⁵⁷ as well as “Rüsselhenkel” vessels from Maliq⁵⁸ and from Burimas II⁵⁹ (Fig. 7.8), including some mugs with oval mouths.⁶⁰ (Fig. 7.7) Korkuti also makes mention of spiraloid decoration as linking the Maliq IIA horizon with the early Lasinja culture.⁶¹

Further to the north, we can find very similar types in related Pelagonian and Mid-Balkan cultural formations: those of the Crnobuki culture with its crusted red paint and rolled rims (Fig. 7.10, 11, Fig. 8.1); as well as the Bakarno Gumno and Šuplevec cultures with similar features in the pottery.⁶² The Bulgarian Krivodol, the Sălcuța and even the Bubanj Hum Ia horizon have very much in common with the Sălcuța and latest Vinča assemblages, as regards their ceramic ware with its crusted paint, rolled rims and graphite decoration. The mutual contacts which are also manifested in the Tiszapolgár and late Bapska-Lengyel perforated and bell-shaped pedestals which are found over the whole of the Balkan peninsula. (Fig. 3.12) Among the cultural formulations mentioned here, it is the Sălcuța culture that offers especially close parallels to the southwest Transdanubian borderland pottery within the late Lengyel sphere. Many examples, almost identical to the Zalaszentbalázs types, can be found in Sălcuța I-III assemblages, but particularly those in the IIb and III horizon (e.g. vessels with biconical profiles, thickened-rolled-rims, spouted vessels, egg-shaped pots, etc.⁶³ (Fig. 7.3-9, 8.11)

After this short enumeration of cultures where parallel ceramic finds occur and probable contacts, a picture can be drawn of a broad horizon, synchronising some early Chalcolithic cultural formations from Thessaly, Macedonia, Thracia, Pelagonia, the Banat, Oltenia, Serbia, Slavonia, East and Southwest Hungary. The crucial point of this scheme are marked by late Lengyel, Tiszapolgár, late Vinča, the Karanovo VI circle and the early Rachmani cultures, connecting the Carpathian Basin to the Balkan Peninsula and through this to the Aegean world. The question is, however, what historical processes, what sort of a cultural history could be imagined as a background to these processes?

M. Garašanin assumes that it was the Bubanj Hum formation in Serbia that played the transmitting role between the above-mentioned southeast European cultures and Vinča.⁶⁴ Somewhat modifying Garašanin's early opinion, however, I would argue for a reconstruction of this transmission not only as

⁴⁹ HEURTLEY 1939, 158–161; PARZINGER 1993, Pl. 141/10.

⁵⁰ RENFREW–GIMBUTAS–ELSTER 1986.

⁵¹ WEISSHAAR 1979.

⁵² RENFREW 1970, 45, 48.

⁵³ PRENDI 1966; PRENDI 1976.

⁵⁴ KORKUTI 1991.

⁵⁵ KORKUTI 1996.

⁵⁶ KORKUTI 1991, Pl. 1.

⁵⁷ KORKUTI 1991, 248.

⁵⁸ PRENDI 1976, Fig. 16/10.

⁵⁹ KORKUTI 1996, Fig. 92/10.

⁶⁰ KORKUTI 1996, Fig. 96/1, 96/13.

⁶¹ KORKUTI 1996, 219.

⁶² HAUPTMANN 1967, Figs. 5/5, 6 Figs. 6/1–4. GARAŠANIN 1953, GARAŠANIN 1958: 118; HAUPTMANN 1967; SIMOSKA–KITANOSKI–TODORVIĆ 1976, Pl. X/1.

⁶³ BERCIU 1961, 251, Fig. 80, 260, Fig. 93; BERCIU 1961, 268, Fig. 99; BERCIU 1961, 300, Fig. 125; BERCIU 1961, 319, Fig. 142.

⁶⁴ GARAŠANIN 1958, 58–60.

moving in a south to north direction, but also in the opposite direction. The mutual contacts, a network of communications and the lesser importance of looking for a prior area is clearly shown by finds like the well known clay imitation of the Gumelnița and Tiszapolgár golden plates, the “Ringidols” found in the Thessalian Pevkakia Magula.⁶⁵ Returning to the “Rüsselhenkel” vessel type, before attempting trace the movement of the type from the southeast to the northwest or the converse, we must consider some identical pieces from Vinča assemblages in the Romanian Banat. From a most recent publication F. Drașovean dates the “Rüsselhenkel” mugs from Hodoni (Hodony) to the Vinča C phase which precedes the late Lengyel culture and also the entire horizon discussed here.⁶⁶ Similar connections between the Vinča C2D phase and the earliest Rachmani culture can be established at the eponymous settlement.⁶⁷ (*Fig. 7.10*) Consequently, one may not exclude the possibility that the primary occurrence of this type lies in some middle area, in the Vinča distribution area. It might have spread at the beginning of the Early Chalcolithic through two way trade and contact routes: it could reach the Lengyel area following the Drava and Mura valleys, and meanwhile, down the Balkan rivers towards the Aegean.

CHRONOLOGICAL CONSEQUENCES

With the help of such examples it can perhaps be demonstrated that the thinking that change moved in only one direction is not very useful in this early Chalcolithic horizon. This conclusion was first suggested by B. Brukner, who published a map of southeastern Europe which reflects the coeval cultural formations as being in contact with each other from Transdanubia to Thessaly.⁶⁸ Similar considerations can be read in Chapman’s summary work.⁶⁹ This horizon was more recently discussed in detail in works by N. Tasić, B. Jovanović, J.-P. Déroule, J. Lichardus and H. Parzinger. Each of these studies concludes that this was a time which saw increasingly unifying cultures. N. Tasić calls this period the first step of the chalcolithisation, “Äneolithisierung”, consisting of three grades.⁷⁰ Jovanović suggests the existence of a cultural unit including the Vinča distribution area (his Gradac II and III phases) together with Central Bulgaria, Thracia and Thessaly.⁷¹ Before postulating the emergence of steppe groups with high social ranks,⁷² J. Lichardus stressed the continuous development up to the early Chalcolithic over the whole huge area on the one hand,⁷³ and on the other hand, the formulation of Central European Chalcolithic cultures inspired by the horizon discussed here.⁷⁴ In the chronological table composed by J.-P. Déroule, this horizon again appears as the oldest phase of his “chalcolithique ancien”.⁷⁵ He makes it clear that we can talk about a great integration and stylistic unification over the whole area.⁷⁶ Finally, the studies of H. Parzinger must be mentioned here, as good summaries of the problems surrounding this integration between the Rachmani culture and its neighbours.⁷⁷

The cultural process of transmission and chalcolithisation, as well as the very likely cultural and trade route from the Vinča area to the Upper Danube valley through Transdanubia was discussed in detail in two recent publications already mentioned here. I have also used a map to show the presence of contexts with mixed late Lengyel, Vinča and Sălcuța elements on a map. The sites clearly follow the Drava and the Mura valleys.⁷⁸ (*Fig. 10*)

What help can a new type, the “Rüsselhenkel”, now demonstrably common in the early Chalcolithic of southeast Europe be in resolving some of the problems still surrounding this period?

First, such data may enrich what we know about the existence of an unified horizon found over a vast geographic area at the beginning of the Chalcolithic, and also the essential role of the late Vinča cul-

⁶⁵ WEISSHAAR 1988, 51–52, Fig. 88.

⁶⁶ DRAȘOVEAN 1996.

⁶⁷ VASIĆ 1936, Fig. 241.

⁶⁸ BRUKNER 1982–83, 11–12, Fig. 3.

⁶⁹ CHAPMAN 1981, 77–83.

⁷⁰ TASIĆ 1991, 265.

⁷¹ JOVANOVIĆ 1993, 68–69.

⁷² LICHARDUS–LICHARDUS–ITTEN 1998.

⁷³ LICHARDUS 1988, 84.

⁷⁴ LICHARDUS 1986.

⁷⁵ DÉROULE 1991, 233.

⁷⁶ DÉROULE 1991, 233–234.

⁷⁷ PARZINGER 1991; PARZINGER 1993, 263–265.

⁷⁸ BÁNFFY 1996b; BÁNFFY 1996c.

BC cal	Croatia (Drava r.)	E-Slovenia (Mura r.)	E-Austria	Moravia	S-W Slovakia	W-Hungary (Transdanubia)	E-Hungary (Tisza r.)	W-Romania (Transylvania)	Serbia (Central Balkans)	S-E Romania (Lower Danube r.)	Central Bulgaria	Thessaly	
±3500	Baden		Baden (Össarn) Boleráz	Baden Boleráz	Baden Boleráz	Baden Boleráz Proto-Boleráz	Baden Boleráz Proto-Boleráz			Cotofeni Cernavoda III			Late CHALCOLITHIC
±4000	Salcuta IV Lasinja	Furchenstich Balaton-Lasinja	Retz Baalberg Bisamberg- Oberpullendorf	Jevšovice C Trichtenbecher Baalberg Jordanow	Bajč Ludanice	Furchenstich Balaton-Lasinja	(Hunyadi- halom) B Bodrog- keresztúr A	Salcuta IV Bodrog- keresztúr A	Salcuta IV Bubanj Hum la	Cernavoda I	Pevec	Rachmani II	Middle
±4200	Lengyel- Sopot III (Sece)	Late Lengyel	Lengyel- Moravian Painted IIb	Moravian Painted IIb	(Late) Lengyel IV	IIIb (Late) Lengyel IIa	Tiszapolgár Proto- Tiszapolgár	Cucuteni (Erősd)	III Salcuta II I D ₂	Gulmenita	Varna Karanovo VI (Kodzadermen)	Rachmani I	Early
±4500	Bapska- Lengyel- Sopot II I		IIa Lengyel- Moravian Painted I	IIa Moravian Painted I	(Classic) III Lengyel (Early) II I Luzianky	(Classic) II Lengyel (Early) I Sé	Herpály Tisza Szakálhát	Petresti Tordos	D ₁ Vinča C	Poljanica Hamangia	(Marica) V Karanovo IV (Kalojanovec)	Otzaki B A Arap	Late NEOLITHIC
±5300	Linear Pottery (Malo Korenovo)		Notenkopf Linear Pottery	Stichband	Zseliz Linear Pottery	Zseliz Linear Pottery	Bükk Linear Pottery Sztalmár II	Ciumești Late Cris	B ₁ Vinča B ₁ A	Boian- Vadastra	Karanovo III (Vesselinovo)	Tsangli Sesklo	Middle
±6000	Starčevo					Starčevo	Körös	Cris	Starčevo	Gradesnica Circea	Karanovo II I	Protosesklo	Early

Fig. 10. Chronological chart

ture in developing this unity. Second, this is certainly not the first attempt to cross-check the chronological and cultural development of the Carpathian Basin and the Balkan Peninsula. However, this scheme presented above may somewhat modify some earlier opinions about this development. Some fifteen years ago, P. Raczky connected the beginnings of the Rachmani culture to Bodrogkeresztúr assemblages,⁷⁹ repeating the same opinion more recently.⁸⁰

Setting out from the new evidence, however, including occurrences of the “Rüsselhenkel”, it seems ill-advised to draw parallels between ceramic assemblages of the Bodrogkeresztúr culture and those from the beginning of the Rachmani I culture (“...the classic Gumelnița-Karanovo VI-Vinča-Pločnik-Tiszapolgár period entirely precedes the Rachmani culture.”).⁸¹ On the contrary, the opinion seems to be reinforced that the beginning of the Rachmani culture can be regarded coeval with the preceding Tiszapolgár and latest Lengyel horizon. This also serves as a new fixed point which might anchor the relative sequence of the Carpathian Basin to that of southeast Europe. The special importance of all these factors lies in the fact that this fixed point belongs in the Lengyel cultural formation which, in fact, has a verified and well worked out chronological relationship with assemblages to the north and west, the Central European sequence.

Further on, the trade and cultural contacts between remote areas become a little clearer. The Balkan sites lie along this route from the shrunk territory of the Vinča D culture, through Slavonia, Slovenia, southwestern and western Transdanubia, the Vienna Basin and finally the Vienna Basin and southern Bavaria. Now it has become clear that these contacts do not originate in the Mid-Balkans but part of a larger system in which the early Rachmani and coeval Aegean-Thessalian cultural formulations are also involved.

⁷⁹ RACZKY 1982.

⁸¹ RACZKY 1988, 51.

⁸⁰ RACZKY 1995, chronological chart. The “Rüsselhenkel” type appears in RACZKY 1988, on Plate 33, turned upside down, based on Pevkakia Magula, from “different Rachmani-levels”.

As to the latest phase of the final Lengyel culture, it can be considered a more mobile period than the preceding phases, both in terms of territorial expansion and as regards mutual cultural exchanges. This completely fits in with our understanding of the instability that marked the beginning of the Early Chalcolithic.

As the very same route can be reconstructed immediately after the end of the Lengyel culture at the time of the Lasinja expansion, it can be assumed that the process began a phase earlier in the whole region.

It is also worth mentioning why the communication areas appear to be fairly similar in the very different Neolithic and Chalcolithic periods. More recently, a map published on the so-called “green corridors” (i.e. mostly river valleys with a balanced and wet microclimate) appear identical to the routes along which the finds and find complexes studied here occur.⁸² These routes include the Axios-Vardar-Morava and Struma valleys in the south (the Aegean groups and the Thessalian Rachmani culture); the lower part of the Danube with its tributary rivers (the Sălcuța-Krivodol cultures) and; the Sava-Mura and Rába rivers in the west (the final Lengyel culture) up until the Danube again to complete the “green corridor” areas to the west and northwest (Epi-Lengyel, Münchshöfen groups).

CONCLUSIONS: THE “WESTERN ROUTE” AND THE EAST-WEST DIVISION OF THE LENGYEL CULTURE

Finally, a question has to be put about the people themselves, the ones “responsible” for the changes. Did this route act as a mediator for cultural inventions or can it be considered the archaeological heritage of a particular migration?

In my opinion, it is just possible that this process also entailed the influx of a limited number of people from the southeast. At the same time, it has become clear that in Zalaszentbalázs and its environs, the main reason behind the changes was not foreign ethnic influences on the surviving Lengyel population but instead a series of impulses which inspired the people of the late Lengyel phase to gradually relinquish their neolithic practices. A definite dry period, a climatic change in the Early Chalcolithic, marking the last centuries of the 5th Millennium BC, might have encouraged this process.⁸³ These factors mobilised the previously static population, and as a result, the large neolithic-type settlements were transformed into a number of smaller, single-layer settlements, where animal keeping was of growing importance. This mobility is believed to have resulted in better communication among the various ethnic groups, which in turn promoted cultural and commercial contacts among them. After the Linear Pottery expansion, the Vinča D2-Sopot III-Lengyel III-MOG IIa horizon outlined above must have been the first of numerous waves of Aegean-Balkan influences into Central Europe. Shortly afterwards, the western Transdanubian Lengyel-Balaton-Lasinja culture mediated the Chalcolithic life-style and practices from southeast Europe towards the northwest.

The question is also to be raised, concerning the usefulness of all that has been said about this so-called “western route” into Central Europe. By reconstructing this cultural route, new light can be shed on at least two problems.

First, it can be explained why the material from all late Lengyel sites in western Hungary differ so sharply from that of the Zengővárkony types in eastern Transdanubia, but display striking similarities with the Moravian Painted Ware culture i. e. the northwestern group of the cultural formation. The old problem of the differences between the whole eastern and western Lengyel cultural sphere should also be mentioned here, as the border between the two groups divide Transdanubia along a north-south line extending through about the middle of lake Balaton. Evidently, the late Lengyel sites showing strong southeast European influences all fall within the distribution area of the western group.

Secondly, the existence of this cultural and trade route explains to a certain extent why the Middle Chalcolithic Jordanow-Jordansmühl culture has a certain Lasinja character, in contrast to the pure Lengyel

⁸² SÜMEGI-KERTÉSZ 1999, 18.

⁸³ BÁNFFY 1994, 293; CHAPMAN-BATOVIĆ 1996, 21–23.

character of the Ludanice culture east of its territory. Similarly, regarding the end-station of this route, we can to some extent explain the existence of the hitherto isolated late Bavarian Münchshöfen vessel types, described as a separate phase (the Wallerfinger phase) only on the basis of their clear southeastern, post-Vinča and Balaton-Lasinja features.

In this way, the instability and disintegration which characterised the end of the Mid-Balkan Vinča-Pločnik culture was one positive factor in the influx of Chalcolithic inventions to Central Europe, transferring them most probably through this “western route” during the final phase of the Lengyel culture, around 4300 BC.

As he looked for unified relative chronological horizons, H. Parzinger had to restrict the conclusions concerning his horizon 8 mainly to the eastern part of the Carpathian Basin, mentioning that there were not enough well-founded data as far as the western Balkan area and Transdanubia are concerned.⁸⁴ Now, the analysis of the unique mug type from Zalaszentbalázs, with its not only Central Balkan, but further on to the south and east, Aegean parallels, shows the intensity and manifold character of this cultural and trade route supporting a system of continual communication. In many points this resulted in a unified character to the cultural development of a vast area in southeast Europe and the western part of the Carpathian Basin, and helped introduce early Chalcolithic technological inventions and new social structures to far off regions in the west central parts of Europe.

REFERENCES

- | | |
|------------------------------|---|
| ALRAM-STERN 1996 | = E. ALRAM-STERN: Die ägäische Frühzeit 2. Forschungsbericht 1975–1993. 1. Das Neolithikum in Griechenland. Wien 1966. |
| BÁNFFY 1994 | = E. BÁNFFY: Transdanubia and eastern Hungary in the Early Copper Age. <i>JAMÉ</i> 36 (1995) 291–296 |
| BÁNFFY 1996a | = E. BÁNFFY: Early Chalcolithic settlement at Zalaszentbalázs-Szölőhegyi mező. In: B. M. Szőke (ed.): Archaeology and settlement history in the Hahót Basin, South West Hungary. <i>Antaeus</i> 22 (1996) 71–108 |
| BÁNFFY 1996b | = E. BÁNFFY: South West Transdanubia as a mediating area. On the cultural history of the Early and Middle Chalcolithic. In: B. M. Szőke (ed.): Archaeology and settlement history in the Hahót Basin, South West Hungary. <i>Antaeus</i> 22 (1996) 157–196. |
| BÁNFFY 1996c | = E. BÁNFFY: Vinča impacts on late neolithic/early chalcolithic Transdanubia. In: <i>The Vinča culture. Its role and cultural connections</i> . Timișoara 1996, 323–334. |
| BERCIU 1961 | = D. BERCIU: Contribuții la problemele neoliticului în România în lumina noilor cercetări. București 1961. |
| BOGDANOVIĆ 1990 | = M. BOGDANOVIĆ: Die spätneolithischen Siedlungen in Divostin. In: D. Srejović–N. Tasić (eds): <i>Vinča and its world. International symposium. The Danube region between 6000 to 3000 BC</i> . Belgrade 1990, 99–106. |
| BONDÁR 1996 | = M. BONDÁR: The settlement of the Lengyel culture at Zalaszentbalázs. In: B. M. Szőke (ed.): <i>Archaeology and Settlement History in the Hahót Basin, South West Hungary</i> . <i>Antaeus</i> 22 (1996) 51–70. |
| BRUKNER 1962 | = B. BRUKNER: Praistorijsko naselje Beletinci kod Obreža (Prähistorische Siedlung auf der Flur “Beletinci” bei Obrež). <i>RVM</i> 11 (1962) 89–122. |
| BRUKNER 1968 | = B. BRUKNER: <i>Neolit u Vojvodini</i> . Dissertationes 5. Beograd–Novi Sad 1968. |
| BRUKNER 1969 | = B. BRUKNER: Zur Fragen der territorialen Beziehungen der Vinča- und Lengyel-Gruppe. <i>ŠtZv</i> 17 (1969) 61–71. |
| BRUKNER 1980–81 | = B. BRUKNER: Zum Problem der Auflösung der frühäneolithischen Kulturen in Südost-Pannonien. <i>ArchIug</i> 20–21 (1980–81) 16–26. |
| BRUKNER 1982–83 | = B. BRUKNER: Die Vinča-Gruppe und ihr Verhältnis zu den spätneolithischen Kulturen in Nord-Ost-Griechenland. <i>AI</i> 22–23 (1982–83) 1–14. |
| BRUKNER–JOVANOVIĆ–TASIĆ 1974 | = B. BRUKNER–B. JOVANOVIĆ–N. TASIĆ: <i>Praistorija Vojvodine</i> . Novi Sad 1974. |
| CASKEY 1964 | = J. CASKEY: Excavations at Keos 1963. <i>Hesperia</i> 33 (1964) 314–333. |
| CHAPMAN 1981 | = J. C. CHAPMAN: The Vinča culture of southeast Europe. <i>Studies in chronology, economy and society. BAR IntSer</i> 117: I–II. Oxford 1981. |

⁸⁴ PARZINGER 1993, 263.

- CHAPMAN–SHIEL–BATOVIĆ 1996 = J. C. CHAPMAN–R. SHIEL–S. BATOVIĆ: The changing face of Dalmatia. Archaeological and ecological studies in a Mediterranean Landscape. London 1996.
- COLEMAN 1974 = J. E. COLEMAN: The chronology and interconnections of the Cycladic Islands in the Neolithic period and the Early Bronze Age. *AJA* 78 (1974) 333–344.
- COLEMAN 1977 = J. E. COLEMAN: Kephala: a late neolithic settlement and cemetery. Princeton 1977.
- DÉMOULE 1991 = J.-P. DÉMOULE: Les recherches récentes en Grèce septentrionale et les problèmes chronologiques et régionaux des cultures à céramique au graphite. In: J. Lichardus (hrsg.): *Die Kupferzeit als historische Epoche*. Saarbrücken 1991, 227–236.
- DIMITRIJEVIĆ 1971 = ST. DIMITRIJEVIĆ: Zu einigen Fragen des Spätneolithikums in Nordjugoslawien. *Actes du VIII^e Congrès International des Sciences Préhistoriques et Protohistoriques*. Beograd 1971, 141–172.
- DIMITRIJEVIĆ 1979 = ST. DIMITRIJEVIĆ: Sopotska kultura. In: M. Garašanin (red.): *Praistorija Jugoslawenskih Zemalja II. Neolitsko doba*. Sarajevo 1979, 297–303.
- DOUSOUGLI 1987 = A. DOUSOUGLI: Makrovonni-Kefalari Magula-Talioti. *Bemerkungen zu den Stufen FH I und II in der Argolis*. *PZ* 62/2 (1987) 164–220.
- DOUSOUGLI 1992 = A. DOUSOUGLI: Die khalkolithische sog. “Attika-Kephala-Kultur” des südwestägäischen Raumes: chronologische und räumliche Gliederung und auswärtige Beziehungen. *SP* 11–12 (1992) 285–289.
- DRAŠOVEAN 1996 = F. DRAŠOVEAN: Hodoni – locurile neolitice târzii și necropola medievală timpurie. Reșița 1966.
- GARAŠANIN 1953 = M. GARAŠANIN: Preistorijski nalazi iz Crnobuki kod Bitolja (Vorgeschichtliche Funde aus Crnobuki bei Bitolj). *AV* 1 (1953) 97–110.
- GARAŠANIN 1958 = M. GARAŠANIN: Neolithikum und Bronzezeit in Serbien und Makedonien. *BRGK* 39 (1958) 1–130.
- GETZ-PREZIOSI 1977 = P. GETZ-PREZIOSI: Early Cycladic stone vases. In: J. Thimme (ed.): *Art and Culture of the Cyclades*. Karlsruhe 1977, 95–108.
- HAUPTMANN 1967 = H. HAUPTMANN: Zum Neolithikum in Makedonien. *IstMitt* 17 (1967) 1–21.
- HAUPTMANN 1971 = H. HAUPTMANN: Forschungsbericht zur Ägäischen Frühzeit. Das Festland und die kleinere Inseln. *AA* 86 (1971) 348–387.
- HAUPTMANN 1981 = H. HAUPTMANN: Die deutschen Ausgrabungen auf der Otzaki Magula III. Das späte Neolithikum und das Chalkolithikum. *BAM* 21. Bonn 1981.
- HEURTLEY 1939 = W. HEURTLEY: *Prehistoric Macedonia*. London 1939.
- H. SIMON 1987 = K. H. SIMON: Neolit és rézkori települések Tekenye határában. *ZalaiMúz* 1 (1987) 7–46.
- HOMEN 1987 = Z. HOMEN: Grabovac (Site Nr. 46). *AP* 27 (1986[1987]) 47.
- IMMERWAHR 1971 = S. A. IMMERWAHR: The Athenian Agora. Results of the excavations conducted by the American School of Classical Studies at Athens. 13.: The Neolithic and the Bronze Ages. Princeton 1971.
- JOVANOVIĆ 1992–93 = B. JOVANOVIĆ: Gradac phase in the relative chronology of late Vinča culture. *Starinar* N. S. 43–44 (1992–93), 1–11.
- JOVANOVIĆ 1993 = B. JOVANOVIĆ: Vinča and Larisa cultures: migration or autochthone development. *Anatolica* 19 (Special issue on Anatolia and the Balkans symposium) (1993) 63–74.
- KALICZ 1982 = N. KALICZ: A Balaton-Lásinja-kultúra történeti kérdései és fémleletei (The historical problems of the Balaton-Lásinja culture and its metallic finds). *ArchÉrt* 109 (1982) 3–17.
- KÁROLYI 1992 = M. KÁROLYI: A korai rézkor emlékei Vas megyében (The Early Copper Age in County Vas). Szombathely 1992.
- KERTÉSZ–SÜMEGI 1999 = R. KERTÉSZ–P. SÜMEGI: Teóriák, kritika és egy modell: miért állt meg a Körös-Starčevo kultúra terjedése a Kárpát-medence centrumában? (Theories, critiques and a model: why did the expansion of the Körös-Starčevo culture stop in the centre of the Carpathian Basin?) *Tisicum* 11 (1999) 9–23.
- KORKUTI 1991 = M. KORKUTI: Aspects de la culture énéolithique en Albanie. In: J. Lichardus (hrsg.): *Die Kupferzeit als historische Epoche*. Bonn 1991, 247–258.
- KORKUTI 1996 = M. KORKUTI: Neolithikum und Chalkolithikum in Albanien. *Balkan Kommission* 4. Mainz 1996.
- LICHARDUS 1986 = J. LICHARDUS: Lengyel IV und dessen kulturelle Vermittlerrolle bei der Herausbildung der frühen Kupferzeit Mitteleuropas. *BÁMÉ* 13 (1986) 31–40.
- LICHARDUS 1988 = J. LICHARDUS: Der westpontische Raum und die Anfänge der kupferzeitlichen Zivilisation. In: *Macht, Herrschaft und Gold*. Saarbrücken 1988, 79–129.
- LICHARDUS–LICHARDUS-ITTEN 1998 = J. LICHARDUS–M. LICHARDUS-ITTEN: Nordpontische Gruppen und ihre westlichen Nachbarn. Ein Beitrag zur Entstehung der frühen Kupferzeit Alteuropas. In: B. Hähn

- sel–J. Machnik (hrsg.): Das Karpatenbecken und das Osteuropäische Steppe: Nomadenbewegungen und Kulturaustausch in den vorchristlichen Metallzeiten (4000–500 v. Chr.) Rahden/Westf. 1998, 99–122.
- MARKOVIĆ 1980 = Z. MARKOVIĆ: Krč bei Beketinec und das Ende des Neolithikums im Nordwestlichen Kroatien. Poročilo 8 (1980) 27–34.
- MARKOVIĆ 1985 = Z. MARKOVIĆ: Zum Problem des frühen Äneolithikums in Nordwestkroatien. AV 181 (1985) 1–33.
- OBEREDER 1989 = J. OBEREDER: Die jungneolithische Siedlung Raababerg bei Graz. Manuscript. (Diplomarbeit zur Erlangung des Magistergrades der Philosophie) Wien 1989.
- PAHIĆ 1976 = ST. PAHIĆ: Siedlungsfunde in den westlichen Slovenske Gorice – Andrenci, Spodnji Duplek, Spodnji Porčič, Vumpah. Poročilo 5 (1976) 29–83.
- PARZINGER 1991 = H. PARZINGER: Zur Rachmani-Periode in Thessalien. Germania 69/2 (1991).
- PARZINGER 1993 = H. PARZINGER: Studien zur Chronologie und Kulturgeschichte der Jungstein-, Kupfer- und Frühbronzezeit zwischen Karpaten und Mittlerem Taurus. Mainz 1993.
- PAVELČIK 1974 = J. PAVELČIK: Eneolitické sídlisko Uherský Brod/Kyckov a Havrice/cihelna. SAB 2:5 (1974)
- PLATON 1964 = N. PLATON: Ergasiai diamorphoseos tou archaiologikou chorou Akropoleos. In: Periechomena Chronikon 1. Arh. Deltion 19 (1964) 21–37.
- PRENDI 1966 = F. PRENDI: La civilisation préhistorique de Maliq. StudAlb 3 (1966) 255–280.
- PRENDI 1976 = F. PRENDI: Le néolithique et l'énéolithique en Albanie. Iliria 6 (1976) 41–99.
- RACZKY 1974 = P. RACZKY: A Lengyeli-kultúra legkésőbbi szakaszának leletei a Dunántúlon (Funde der spätesten Phase der Lengyel-kultur in Westungarn). ArchÉrt 101 (1974) 185–210.
- RACZKY 1982 = P. RACZKY: Adatok a Bodrogkeresztúri-kultúra déli kapcsolataihoz és kronológiájához (Data to the southern connections and chronology of the Bodrogkeresztúr culture). ArchÉrt 109 (1982) 177–190.
- RACZKY 1988 = P. RACZKY: A Tiszavidék kulturális és kronológiai kapcsolatai a Balkánnal és az Égei-kummal a neolitikum, rézkor időszakában. Újabb kutatási eredmények és problémák (The cultural and chronological connections of the Tisza region with the Balkans and the Aegean during the Neolithic and Copper Ages). Szolnok 1988.
- RACZKY 1995 = P. RACZKY: New data on the absolute chronology of the Copper Age in the Carpathian Basin. In: Neuere Daten zur Siedlungsgeschichte und Chronologie der Kupferzeit des Karpatenbeckens. IPH 7. Budapest 1995, 51–60.
- RAKOVSKY 1989 = I. RAKOVSKY: Die neuesten Ergebnisse zur Bedeutung des mährischen Raumes zur Zeit des frühesten Äneolithikums. In: M. Buchvaldek–E. Pleslová-Štiková (hrsg.): Das Äneolithikum und die früheste Bronzezeit (C-14 3000–2000 B. C.) in Mitteleuropa kulturelle und chronologische Beziehungen. Praehistorica 15. Praha–Liblice 1989, 61–66.
- RENFREW 1970 = R. RENFREW: The place of the Vinča culture in European prehistory. ZNM 6 (1970) 45–57.
- RENFREW 1972 = C. RENFREW: The emergence of civilisation: The Cyclades and the Aegean in the 3rd Millennium. London 1972.
- RENFREW–GIMBUTAS–ELSTER 1986 = C. RENFREW–M. GIMBUTAS–E. S. ELSTER: Excavations at Sitagroi: a prehistoric village in Northeast Greece I. Los Angeles 1986.
- RUTTKAY 1976 = E. RUTTKAY: Beitrag zum Problem des Epilengyel-Horizontes in Österreich. ArchA Beiheft 13. Festschr. f. Pittioni (1976) 285–298.
- RUTTKAY 1983 = E. RUTTKAY: Das Neolithikum in Niederösterreich. Forschungsberichte 12. Wien 1983.
- RUTTKAY 1983–84 = E. RUTTKAY: Zusammenfassender Forschungsstand der Lengyel-Kultur in NÖ. MUAG 33–34 (1983–1984) 221–246.
- RUTTKAY 1985 = E. RUTTKAY: Fernbeziehungen im neolithischen Europa. In: MAG 115 (1985) 139–162.
- RUTTKAY 1993 = E. RUTTKAY: Das Ende der Donauländischen Welt und Südosteuropa. MAG 121 (1993) 161–183.
- ŠAVEL 1992 = I. ŠAVEL: Bukovnica – rezultati terenskih raziskav v letih 1987–88 (Bukovnica – Resultat der Ausgrabungen in den Jahren 1987–1988). Poročilo 20 (1992) 57–86.
- SIMIĆ 1987 = J. SIMIĆ: Kneževi Vinogradi (Site Nr. 18). AP 27 (1986) 43.
- SIMOSKA–KITANOSKI–TODOROVIĆ 1976 = D. SIMOSKA–B. KITANOSKI–J. TODOROVIĆ: Naselbata Crnobuki. Macedoniae Acta Arch 2 (1976) 43–83.
- SÜSS 1969 = L. SÜSS: Zum Problem der zeitlichen Stellung der Münchshöfener Gruppe. ŠtZv 17 (1969) 393–414.
- TASIĆ 1986 = N. TASIĆ: Sopot-Lengyel, Lasinja und Boleráz Funde in Gradina am Bosut in der Nähe von Sid. SzBÁMÉ 13 (1986) 51–56.

- TASIĆ 1991 = N. TASIĆ: Migrationsbewegungen und Periodisierung der äneolithischen Kulturen des jugoslawischen Donaumaues und Zentralbalkans. In: J. Lichardus (hrsg.): Die Kupferzeit als historische Epoche. Bonn 1991, 265–270.
- T. BIRÓ 1996 = K. T. BIRÓ: The chipped stone industry from Zalaszentbalázs-Szólóhegyi mező. *Antaeus* 22 (1996) 109–118.
- VASIĆ 1936 = M. VASIĆ: Preistoriska Vinča I–IV. Beograd 1932–36.
- VLADÁR–LICHARDUS 1968 = J. VLADÁR–J. LICHARDUS: Erforschung der frühäneolithischen Siedlung in Branč. *SlA* 16/2 (1968) 263–352.
- WACE–THOMPSON 1912 = J. B. WACE–M. S. THOMPSON: Prehistoric Thessaly. Cambridge 1912.
- WEISSHAAR 1979 = H.-J. WEISSHAAR: Nordgriechischer Import im kupferzeitlichen Thessalien. *JRGZM* 26 (1979) 114–130.
- WEISSHAAR 1988 = H.-J. WEISSHAAR: Die deutschen Ausgrabungen auf der Pevkakia-Magula in Thessalien I: Das späte Neolithikum und das Chalkolithikum. *BAM* 28. Bonn 1988.
- WEISSHAAR 1991 = H.-J. WEISSHAAR: Galepsos und Urfirnis. Beiträge zur relativen Chronologie der Rachmanikultur. In: J. Lichardus (hrsg.): Die Kupferzeit als historische Epoche. Bonn 1991 237–246.