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Systems of Periodization Developed and Used to Study the Urnfield Period in Slovakia¹

ABSTRACT

Furmánek V. and Mitáš V. 2016. Systems of Periodization Developed and Used to Study the Urnfield Period in Slovakia. *Analecta Archaeologica Ressoiviensia* 11, 19–48

The authors offer review of systems of periodization dealing with issues of the Urnfield Period in Slovakia. They refer to the general principles on which chronological and synchronisation models are based, but also on their creation and use. The elements of current periodization of the Bronze Age have been evolving in Europe since the late 19th and the early 20th centuries (O. Montelius, P. Reinecke), and these systems were further developed. Specifically, the authors deal with more than twenty systems of periodization and synchronisation, which are gradually discussed and then introduced schematically. These systems were developed by Slovak researchers (M. Novotná, V. Furmánek, S. Demeterová and others) during the 20th and the early 21st centuries. In modified form, these systems are being used to study the Urnfield Period up to the present day.

Keywords: Slovakia, Urnfield Period, Chronology, Periodization, Synchronisation

Received: 01.06.2016; **Revised:** 31.12.2016; **Accepted:** 18.01.2017

At present there is a large number of different systems of periodization not only in Slovakia, but also neighbouring countries, which indeed facilitate, but at the same time complicate communication among researchers.

One of the dominant entities of any historical research is the phenomenon of time. Great and certainly well-deserved attention has been paid to the issues of chronology, periodization and synchronisation of the Bronze Age throughout Europe. In all prehistoric periods there is relative chronology and absolute chronology. The relative chronology determines the age of a feature or event relative to the age of other features or events.

Relative chronology is based on several principles.

¹ This contribution is the result of the project implementation: VEGA Project no. 2/0091/16. Translation: Dana Marková.

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The first one is synchronisation, *i.e.* a coincidence in time, comparability and synchronisation of two or more historical events and processes. It is used in chronological comparison of historical, economic and social development of territories, archaeological cultures, events, features and so on. Basically there are two types of synchronisation.

First, it is the synchronisation of relative chronology with data of absolute chronology. In principle, this means that time-anonymous archaeological sources, dated only approximately by relative chronology, are synchronized with known dates and accurately dated historical events and eras. Second, it is a struggle to find a coincidence in time between two or more systems of relative chronology in neighbouring or farther regions. There is used the evidence of cultural interactions, typology and also detailed system of time horizons within the frame. Vertical and horizontal stratigraphy, methods of combinatorial data analysis based on the principles of formal logic, statistics, but especially seriation, cluster analysis or analyses of stylistic similarities. This results in comparative regional and trans-regional schemes of relative chronology of different time periods in prehistory and early history.

The second principle of relative chronology is typology. Typology is basically a method of scientific inquiry, based on organization of portable artefacts or events into types through type being a general and individualized model at the same time. In archaeology it is a classic method of analysis and classification of prehistoric monuments by material, shape, decoration etc. It is based on the premise that between a manufacturer and a product was a dialectical relationship that left clear traces on the resulting products, visible, for example, in changes of shape, ornament, technology and function. Typological method was applied in archaeology already at the end of the 19th century mainly by Swedish researcher H. Hildebrand, but especially O. Montelius (1885; 1917). He applied his typological principles of chronological dating method to the Bronze Age artefacts in Scandinavia.

The success of Montelius relative chronological dating method of the Nordic Bronze Age, used even at present time, resides in the application of typological method with methodological rigour on suitable assemblage (bronze artefacts) in relatively constant historical environment (with no major external intervention). Typology in the original concept can actually be seen as application of Darwinism in archaeology. It was assumed that archaeological entities are behaving

like living organisms. Later it was found that the mechanical application of the laws of evolution into products of human activity is not entirely correct.

A gradual suspicion of classical typological methods has started especially since the 1950s. It also meant a departure from constructing isolated typological series, which would be seen as a basis for chronological and historical conclusions. At present, the typology is still used in archaeology, but only as part of a comprehensive structural analysis of large archaeological assemblages. It is notably reflected in modern analytical and spatial archaeology. Those methods are approaching the sources objectively, not generating pre-shaped, functional or technical elements that might reflect developmental changes, but are verified using mathematical and statistical methods.

Stratigraphy is another principle. It is derived from the methods of geology. It consists of records of the sequence of geological strata. This is based on a premise that the bottom intact layer is older than the upper. It is a stratigraphic presupposition. In addition, there is also not entirely fortunate term of horizontal (lateral) stratigraphy, whereby it is assumed that two adjacent archaeological contexts were in a particular diachronic status.

Periodization of Slovak archaeology is based on well-known, widely accepted European schemes of periodization and modified to the conditions of prehistory and early history in Slovakia. Comprehensive and yet basically accepted system of periodization and chronology of Slovak prehistory and early history was published in *Slovenská Archeológia* in the early 1980s and in broad outlines, with only small corrections it is used up to the present day (Chropovský 1980). According to him, the Stone Age is divided into Early (Palaeolithic), Middle (Mesolithic), New (Neolithic) and Late (Aeneolithic). Palaeolithic is subdivided into early, middle, upper and late, Neolithic to the Early, Middle and Late and so is Aeneolithic. The Bronze Age is divided into Early, Middle and Late.

On these principles chronological models and models of periodization and synchronisation were based and developed to study the Urnfield Period in Slovakia. Periodization of the Bronze Age, like any other periodization of prehistory, is a pragmatic tool and allows for a better orientation in the flow of prehistoric history. Basic tenets of existing periodization of the Bronze Age in Central, Western and Northern

Europe were developed by O. Montelius (1885; 1917) and for Central Europe, mostly by P. Reinecke (1899; 1901; 1924). Reinecke's system has been gradually refined (Furmánek 1977a). The detailed and exhaustive summary of the main Central European systems of periodization has been introduced repeatedly, apparently even too minutely (Gumă 1993), therefore here we only refer to their complex publishing in Slovakia and Germany (Furmánek *et al.* 1991, 21–28; 1999, 12–18).

We emphasize that in Slovakia it is currently mainly used for comparative chronological and regional system of synchronisation, which was launched for application in a volume of *Prähistorische Bronzefunde* (Jockenhövel 1974; Müller-Karpe 1974). This means that according to this model the Bronze Age in Slovakia is divided into the Early, Middle and Late. Within the established symbols these are stages BA, BB, BC, BD, HA, HB and other refinements (Furmánek *et al.* 1991, 21–28; 1999, 12–14). Albrecht Jockenhövel (1971, Abb. 3) was the first to publish a detailed and geographically extensive synchronisation table of Central European Urnfield cultures and already mentioned chronological and regional system of synchronisation (Fig. 1; Jockenhövel 1974, 69). Attempts to create new synchronisation for the Carpathian region from the existing schemes are well known today as well (Przybyła 2009, 51, fig. 4).

Earlier work of fundamental importance concerning the issues of Slovak prehistory (Budinský-Krička 1947; Eisner 1933) paid only marginal attention to the periodization of the Urnfield Period. This time period was only divided into Early, Middle and Late Bronze Ages and then further analysed according to defined archaeological cultures.

For periodization of the Urnfield Period M. Novotná has done a tremendous job. She was the first to publish in the monograph dedicated to the bronze hoards of the Urnfield Period in Slovakia (Novotná 1970, 15, Tabelle 1) a brief outline of periodization and its synchronisation with systems of periodization (Fig. 2) developed by W.A. Brunn, A. Mozsolics, H. Müller-Karpe, M. Petrescu-Dîmbovița a M. Rusu. She has further refined the system of periodization and synchronisation in further publications (Fig. 3–5) of the *Prähistorische Bronzefunde* (Novotná 1980, 3, Abb. 1; 1984, 8, Abb. 1; 2001, 3, Abb. 1; Furmánek, Novotná 2006, 65, Abb. 2).

Since 1977 V. Furmánek has studied the periodization and synchronisation of historical development in the northern part of the

Carpathian Basin in the Bronze Age. He submitted extensive and detailed commentary on this issue not only on the pages of *Archeologické rozhledy* in Czech Republic (Fig. 6; Furmánek 1977a, 557, obr. 1), but also in England (Fig. 7; Furmánek 1980a, 124). On the occasion of monographic elaboration of the Piliny Culture his scheme of periodization was published in German (Fig. 8; Furmánek 1977b, 255, Abb. 1).

Of these tables of chronology and synchronisation their modified versions were created (Fig. 9–12), in which archaeological cultures of the Bronze Age in Slovakia have been added and synchronized with the overall system of periodization (Furmánek 1980b, 5, Abb. 1; Furmánek, Veliačik, Vladár 1991, 20; 1999, 13, Tabelle 1; Furmánek, Novotná 2006, 6, Abb. 1). Archaeological cultures of the Bronze Age have also been synchronised on the occasion of publication of “The draft of chronology” in the volume *Slovenská archeológia* (Fig. 13; Furmánek, Veliačik 1980, 161), in so-called Mexican volume (Fig. 14; Furmánek 1981, 63, fig. 1) and only the Urnfield cultures in materials of XIII World Archaeological Congress in Forlì (Fig. 15; Furmánek 1996, 136, fig. 1).

Chronological and synchronisation tables are specific, comparing the historical development of ancient civilizations from the 24th till the 8th century BC with the cultural and historical development of the Bronze Age in Slovakia. For both ancient civilizations as well as Slovakia there are used the same years BC. In the Ancient world section there are datable historical events in chronological order. Their equivalent in Slovakia's section are individual archaeological cultures, word division of cultural and historical development to the Early, Middle and Late Bronze Ages respectively, and significant archaeological sites with dating.

Such synchronisation table was first used in the monograph *L'età d'oro dei Carpaži* (Furmánek, Kruta 2002, 25), in which Slovak archaeological cultures with absolute data are compared with ancient historical events and cultural-historical situation in the north of Italy (Fig. 16). A similar concept, also in chronological and synchronisation table, was published in the monograph *Zlatý vek v Karpatoch* (Fig. 17). Instead of archaeological cultures, significant archaeological sites along with expected time of duration were listed (Furmánek 2004, 19, obr. 3). According to it, synchronisation of the events of most ancient civilizations with best examined site of the Urnfield Period in Radzovce has been created (Fig. 18; Furmánek 1990, 17, tab. 1). Recently, this

principle was applied in another monograph on the Bronze Age in Slovakia (Furmánek 2015, 15, fig. 1).

Inspiring and important are some systems of periodization of archaeological cultures of the Urnfield Period. They were presented either in the form of transparent tables or writing (*e.g.* Kotorová-Jenčová 2010). Ladislav Veliačik (1983), starting from the synchronisation of the Bronze Age in Slovakia (Furmánek 1977a, 557) submitted an excellent periodization and synchronisation of the Slovak branch of the Lusatian Culture (Fig. 19). He compared its duration not only with the so-called Frankfurt School system of periodization, but also with the North European system of synchronisation created by O. Montelius (1917), and periodization of the Lusatian Culture in Bohemia, Moravia and Silesia (Veliačik 1983, 172, obr. 8). Synchronisation tables made for Suciú de Sus (Fig. 20) and Gáva Cultures (Fig. 21) published by S. Demeterová are similar (1984, 17, obr. 3; 1986, 109, obr. 2).

However, it should be noted that at times some attempts to replace these commonly applied systems of synchronisation with another system have appeared, which probably better affected history of the Bronze Age in the Carpathian region and in the broader Eurasia (Lichardus, Vladár 1996, 29–33). It was like an attempt on the new relative chronology, although not all over Slovakia, but only in the south-western part (Lichardus, Vladár 1997, 289, Abb. 11). This attempt was undoubtedly interesting and well-founded by archaeological material which has not been accepted in practice so far.

In conclusion, the present study summarizes systems of periodization developed and used for the study of the Urnfield Period in Slovakia. Its purpose is to comprehensively inform colleagues abroad who are dealing with the issues of Central European Urnfield cultures what systems of synchronisation of the Urnfield Period were used in the past and those used now. The current state of this issue truly reflects the chronological and synchronisation table of the Bronze Age in Slovakia (Fig. 22; Furmánek 2015, 16, fig. 2).

	Čaka-Facies	Velatice-Facies	Knovíz Facies (Bouzek)	Milaveč Facies (Bouzek)	Depotfunde
Jüngere Urnenfelderzeit		Klentnice II	Štítary I	Nynice	
Mittlere Urnenfelderzeit		Velatice-Podolí Übergangs- horizont	VI V	VI V	Rohod-Szentes Jenišovice
Ältere Urnenfelderzeit		Velatice/Očkov	IV III	IV III	Přestavlky Suchdol II
Frühe Urnenfelderzeit	Čaka	Baierdorf	II	Svářeč II	Drslavice Lažany II
	Vor-Čaka	Blučina	Modřany (I)	Vrhavěč (I)	Blučina Plzeň-Jíkalka
Jüngere Hügelgräberzeit	Salka	Velké Hostěrádky	Prag-Hloubětín	Sedlec 39 Všekary-Hustá Leč 1	

Fig. 1. Periodization and synchronisation table of the Urnfields in East of Central Europe (after Jockenhövel 1974)

	Slowakei	Ungarn (A. Mozsolics, W. A. Brunn)	Siebenbürgen (W. A. Brunn, M. Rusu, M. Petrescu— Dimbovita)	H. Müller-Karpe
BB	Koszider-Typus	Koszider-Typus		
BC	Dreveník-Blh	Forró-Velký Blh		BC—14. Jh.
BD	Ožďany	Ópályi	Uriu-Domanesti	BD—13. Jh.
HA1	Buzica-Rimavská Sobota	Kisapáti-Lengyelóti	Cincu-Suseni	HA1—12. Jh.
HA2	Martinček-Bodrog	Jászkarajenő-Uzsavölgy	Turia-Jupalnic	HA2—11. Jh.
HB1	Komjatná	Rohod-Szentes	Moigrad-Tauteu	HB1—10. Jh.
HB2	Somotor-Lúčky		Fizesul Gherlei-Singeorgiul	HB2—9. Jh.
HB3			Somartin-Vetis	HB3—8. Jh.
HC	Istebné-Krásna Hôrka		Bilvanesti-Vint	HC—7. Jh.
HD	↓			

Fig. 2. Synchronisation table of Middle and Late Bronze Age in Slovakia (after Novotná 1970)

Europa und Vorderer Orient	Mitteleuropa	Slowakei					
		Südwest- (Ostteil)	Südwest- (Westteil)	Südost- und Mittel-	Ost-	Lausitzer Kreis	Depotfunde
Ältere Frühe Eisenzeit Späte i t e c e n z e i t	Jüngere Hallstattzeit	↑				↑	Istebné- Krásna Hôrka
	Ältere Hallstattzeit	Kalenderberg			Kušanovice	Orava- Typ	Platénice
	Späte Urnen- felder- zeit	Frühe Hall- statt- zeit			Vojnatina- Somotor	↑	Sitno
	Jüngere Urnenfelderzeit	Brno-Obřany Klentnice II	Chotín			Lausitzisch- Schlesische Gruppen	Somotor- Lúčky
	Mittlere Urnenfelderzeit	Oblekovic Klentnice I	Karpatenländ. Phase Velatice II	Kyjatice		Partizánske (Diviaky II)	Trenčianske Bohuslavice
	Ältere Urnenfelderzeit	Velatice- Očkov	Karpatenländ. Phase Velatice I Čaka	Piliny IV	Gáva Piliny IV	Diviaky (I)	Martinček- Bodrog (Kurd)
	Späte Hügel- gräber- zeit	Baierdorf = Lednice					Buzica (Áranyos)
	Frühe Urnen- felder- zeit	Blučina- Kopčany	(Vor-Čaka)	Piliny III	(Vor-Gáva) Piliny III	Mikušovce	Malá Vieska- Opalyi
	Jüngere Hügelgräberzeit	Zohor		Piliny II	Suciul de Sus Piliny II	Ondrašová	Ožd'any
	Mittlere Hügelgräberzeit	Smolenice	Salka	Piliny I	Piliny I	Martin	Dreveník II- Forro
Mittlere n z e i t	Ältere Hügelgräberzeit		Dolný Peter	Spätotomani	Spätotomani		
		Spätmad'arovec					
	IV	Mad'arovec Spätaunjetitz		Otomani	Otomani		
	Flach-	Nordpannonische inkrustierte Keramik					
	hocker-	Aunjetitz-Mad'arovec Hurbanovo		Otomani	Otomani Košťany- Gyula-Varsánd		
Ältere r o n z e i t	Ältere Bronzezeit	Wieselburg Vorklassisches Aunjetitz Nitra II			Košťany II		
	II						
	I	Nitra I Chlopice-Veselé			Košťany I		
Frühe B							

Fig. 3. Synchronisation table of the Bronze Age in Slovakia (after Novotná 1980)

Europa und Vorderer Orient		Mitteuropa	Slowakei					
			Südwest- (Westteil)	Südwest- (Ostteil)	Südost- und Mittel	Ost	Lausitzer Kreis	Depotfunde
Frühe B R O N Z E Mittlere Z E Jüngere I S E Frühe T Ältere	I		Nitra I Chlopice-Veselé			Košťany I		
	II	Flachhockerzeit	Wieselburg Nitra II			Košťany II		
	III	Ältere Bronzezeit	Hurbanovo Hatvan		Otomani	Otomani Hatvan		
	IV	Ältere	Nordpannonische inkrust. Keramik Aunjetitz-Mad'arovce	Dolný Peter	Spätotomani	Spätotomani		
		Mittlere Hügelgräberzeit	Mitteldanubische Hügelgräber Spätmad'arovce		Piliny	Piliny	Liptovský Michal	Dreveník I
		Jüngere	Zohor	Karpatenländische Hügelgräber			Martin	Dreveník II-Forró
		Späte	Blučina-Kopčany	(Vor-Čaka)		(Vor-Gáva)	Mikušovce Ondrašová	Ožd'aný
		Ältere Urnenfelderzeit	Baierdorf-Lednice	Čaka		Gáva	Diviaky I	Buzica (Aranyos) Malá Vieska-Ópályi
		Mittlere Urnenfelderzeit	Velatices-Očkov	Karpatenländische Phase Velatice I	Kyjatice		Diviaky II	Trenčianske-Bohuslavice
		Jüngere	Oblekovic Klenčnice I	Velatice II				Martinček-Bodrog (Kurd)
		Frühe	Brno-Obrány Klenčnice II	Chotín		Vojnatina-Somotor	Schlesische Lausitzisch-Gruppe	Somotor-Lúčky
		Späte Hallstattzeit	Kalenderberg		Thrakische Kultur	Kuštanovice	Orava-Typ	Sitno
		Ältere Jüngere			Thrakische Kultur		Platénice	Istebné-Krásna Hôrka

Fig. 4. Synchronisation table of the Bronze Age between Central Europe and Slovakia (after Novotná 1984)

MITTELEUROPA		S L O W A K E I					
		Südwest- (Westteil)		Südost- und Mittel-	Ost-	Lausitzer Kreis	Depotfunde
Ha D	Jüngere	↑ K a l e n d e r b e r g	↑ Vekerzug	↑ Vekerzug	↑ Vekerzug	Orava	Istebné- Krásna Hôrka
Ha C	Ältere					Platěnice	
Ha B3	Frühe	↑ Podolí	↑ Chotín (Podolí)	↑ Kyjatice	Vojnatina	Schlesische Stufe	Sitno
Ha B2							
Ha B1	Jüngere		↑ Velatice			Diviaky II	Trenčianske Bohuslavice
Ha A2	Mittlere	Spät	↑ Čaka			Diviaky I	Ducové / Martinček / Bodrog
Ha A1	Ältere	Mittel (Očkov)	↑ Piliny		Gáva		
Bz D	Späte	Früh	↑ Piliny			Mikušovce	Malá Vieska / Buzica
		↑ Mitteldanubische Hügelgräber	↑ Karpätenländische Hügelgräber			Liptovský Mikuláš- Ondrašová	
Bz C2	Jüngere				Piliny	Piliny	Martin

Fig. 5. Synchronisation table from the Middle Bronze Age till the Iron Age between Central Europe and Slovakia (after Novotná 2001)

ROKY PŘ. N. L.	SLOVNÍ OZNAČENÍ	REINECKE WILVONSEDER HOLSTE TÖRBRÜGGE MÜLLER-KARPE	FRANKFURTSKÁ ŠKOLA STŘEDNÍ EVROPA JÍŽNÍ BAYORSKO	MOZOLICS	BÓNA	NOVOTNÁ	HÄNSEL
-1200	POZDNÍ	HB ₃	POZDNÍ	ROMÁND B VI		SOMOTOR LÚCKY	
		HB ₂	MLADŠÍ	HAJDÚBÖSZÖRMÉNY		KOMJATNÁ	
		HB ₁	STŘEDNÍ			MARTINČEK BODROG	SD II
	MLADŠÍ	HA ₂	STŘEDNÍ	KURD			
		HA ₁	STARŠÍ	ARANYOS	PŘECHODNÁ PERIODA	BUZICA RIM. SOBOTA	SD I
		BD	RAŇ POZDNÍ	ÓPÁLYI	SB 2	OŽDANY	
	STŘEDNÍ	BC (BC ₂)	MLADŠÍ	FORRÓ	SB 1	DREVENÍK	MD III
		BB ₂ (BC ₁)	STŘEDNÍ	KOSZIDERPADLÁS	MB 3	KOSZIDER	MD II
		BB ₁	STARŠÍ	HAJDÚSÁMSON	MB 2		MD I
	STARŠÍ	BA ₂					FD III
-1500		BA ₁	FLACHHÖCKER	B II	MB 1		FD II
			STRAUBING				FD I

Fig. 6. Synchronisation table of main chronological systems of the Bronze Age in Central Europe (after Furmánek 1977a)

Years B.C.	Bronze Age Phases	Reinecke Willvonseder Holste Torbrügge Müller-Karpe	Frankfurt School		Mozsolics	Bóna	Novotná	Hänsel
1200	Final	HB 3	Final	Central Europe				
		HB 2	Late	Central Europe	Romand B VI		Somotor Lúčky	
		HB 1	Early	Southern Bavaria	Hajdúböszörmény		Komjatná	
	Late	HA 2	Middle	Langengeis- ling	Kurd		Martinček Bodrog	SD II
		HA 1	Early	Hart	B V			
		BD	Incipient	Reigsee	Aranyos	Transitional Period	Buzica Rim.Sobota	
		BC (BC2)	Final	Asenkofen	Ópályi	SB 2	Ožďany	SD I
	Middle	BB2 (BC1)	Late	Hügellgräber	Forró	SB 1	Dreveník	MD III
		BB1	Middle	Göggenhofen	Kosziderpadlás	MB3	Koszider	MD II
		BA 2	Early	Lochham	B III	MB2		MD I
1500	Early	BA 1	Early	Langquaid	Hajdúsámsón	MB1		FD III
			Flachhocker	Straubing	B II			FD II
								FD I

Fig. 7. Synchronisation table of main chronological systems of the Bronze Age in Central Europe (after Furmánek 1980a)

JAHRE WÖRTLICHE V. U. Z. BEZEICHNUNG	REINECKE WILLYVONSEDER HOLSTE TORBRÜGGE MÜLLER-KARPE	FRANKFURTER SCHULE		MOZSOLICS	BÓNA	NOVOTNÁ	HÁNSEL
		MITTELEUROPA	SÜDBAYERN				
-1200	SPÄTE	SPÄTE	ISPÄTES	ROMÁND		SOMOTOR LÚCKY	
		JÜNGERE	MITTLERES	HAJDÚBÖSZÖRMÉNY		KOMJATNÁ	
			ÄLTERES			MARTINČEK BODROG	SD II
	JÜNGERE	MITTLERE	LANGENGESLING	KURD			
		ÄLTERE	IHART	B V	ÜBERGANGS- PERIODE	BUZICA RIM. SOBOTA OŽDANY	SD I
-1500		FRÜHE SPÄTE	RIEGSEE	ARANYOS ÓPÁLYI	SB 2	BLH DREVENIK	MD III
		JÜNGERE	ASENKOFEN	FORRÓ	SB 1		MD II
	MITTLERE	MITTLERE	GÖGGENHOFEN		MB 3	KOSZIDER	MD I
		ÄLTERE	ILOCHHAM	KOSZIDERPADLÁS	MB 2		FD III
	ÄLTERE	"FLACHHOCKER"	LANGQUAID	HAJDÚSÁMSON	MB 1		FD II
			STRAUBING	B II			FD I

Fig. 8. Synchronisation table of main chronological systems of the Bronze Age in Central Europe (after Furmánek 1977b)

Europa und Vorderer Orient	Mitteleuropa	Mozsolics	Novotná	Bronzezeitliche Kulturen in der Slowakei und den Nachbargebieten				
Frühe Eisenzeit Späte Jüngere Mittlere Ältere Frühe B	Späte Urnenfelderzeit	Románd						
	Jüngere Urnenfelderzeit	B VI Hajdúböszörmény	Somotor – Lúčky	18			19	20
	Mittlere Urnenfelderzeit		Komjatná					
	Ältere Urnenfelderzeit	B V Kurd	Martinček – Bodrog				17	
	Späte Hügelgräberzeit	Aranyos	Buzica – Rimavská Sobota	15	16			
	Frühe Hügelgräberzeit	Ópályi	Ožd'any					
	Jüngere Hügelgräberzeit	B IV Forró					13	14
	Mittlere Hügelgräberzeit		Dreveník – Blh	11	12			
	Ältere Hügelgräberzeit	B III Kosziderpadlás	Koszider-Typus				7	
	Jüngere Flachhockerzeit	Hajdúsámson			6			10
	Ältere Flachhockerzeit	B II		3	4	5	8	9
					1			

Abb. 1. Synchronistische Übersicht

Die Zahlen der rechten Spalte bezeichnen folgende Kulturen:^{50a}

- 1 = Veselé-Typ
 2 = Nitra-Kultur
 3 = Wieselburger Kultur
 4 = Aunjetitzer Kultur
 5 = Hurbanovo-Typ
 6 = Mad'arovce-Kultur
 7 = Nordpannonische Kultur

- 8 = Hatvan-Kultur
 9 = Košťany-Kultur
 10 = Otomani-Kultur
 11 = Mitteldanubische Hügelgräberkultur
 12 = Karpatenländische Hügelgräberkultur
 13 = Pilinyer Kultur
 14 = Kultur Suciu de Sus

- 15 = Velaticer Kultur
 16 = Čaka-Kultur
 17 = Lausitzer Kultur
 18 = Podoler Kultur
 19 = Kyjaticer Kultur
 20 = Gáva-Kultur

Fig. 9. Synchronisation table of main chronological systems of the Bronze Age in Central Europe with archaeological cultures in Slovakia (after Furmánek 1980b)

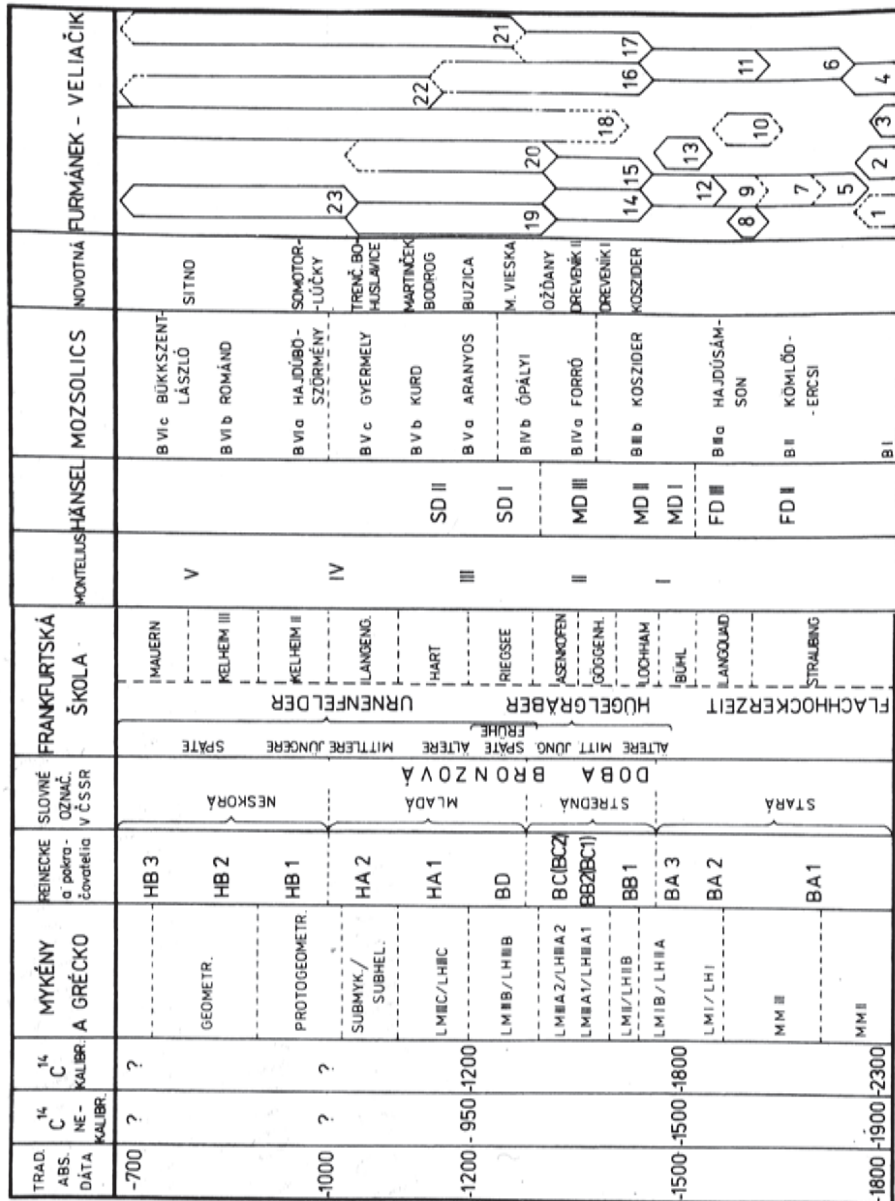


Fig. 10. Synchronisation table of main chronological systems of the Bronze Age in Central Europe with archaeological cultures in Slovakia (after Furmánek et al. 1991)

TRAD. ABS. DATEN	¹⁴ C CAL.	GRIECHEN-LAND	REINECKE C.A.	SLOWAKEI	FRANKFURTER SCHULE	MONTIUS	HÄNSEL	MOZSOLICS	NOVOTNÁ	FURMÁNEK-VELIAČIK
-750			HB3	SPÄTE I	MAURN	V		BVIc BÜKKSZENT-LASZLO	SITNO	
		GEOMETR.	HB2		KELHEIM III			BVIb ROMÁND		
-1000			HB1		KELHEIM II	IV		BVIa HAJDÚBÓ-SZORMENY	SOMTOR-LUCKY	
		PROTOGEOMETR.	HA2	JÜNGERE	LANGENG			BVc GYERMELY	TRENCŠANSKE BOHUSLAVICE	
		SUBMYK / SUBHEL	HA1		HART		SDII	BVb KURD	MARTINČEK BODROG	
-1200	-1200	LMIIIC / LHIIIC				III		BVa ARANYOS	BUZICA	
		LMIIIB / LHIIIB	BD		RIEGSEE		SDI	BIVb ÓPÁLYI	M. VIESKA	21
		LMIIIA2 / LHIIIA2	BC/IBC		ASENKOFEN	II	MDIII	BIVA FORRÓ	OZDANY	20
		LMIIIA1 / LHIIIA1	BB2/BC1	MITTLERE	GÖGGENH.			BIIb KOSZIDER	DREVENIK II	18
		LMIIIB / LHIIIB	BB1		LOCHHMAN	I	MDII		DREVENIK I	14
-1500	-1600	LMIB / LHIIA	BA3		BÜHL		MDI		KOSZIDER	15
		LMII / LH I	BA2	ALTE	LANGQUAD		FDIII	BIIIa HADÚSÁM-SON		12
		MM III	BA1		STRAUBING		FDII	BII KÖMLÖD-ERCSI		10
										9
										7
										5
-2000	-2300	MM II					BI			1
										2
										3
										4
										6

I Glockenbecher-K.; 2 Nagyrév-K.; 3 Ostslowakische Hügelgräber-K.; 4 Nyírség-Zatin-K.; 5 Chotisce-Veselé-K.; 6 Košťany-K.; 7 Nitra-K.; 8 Wieselburger-K.; 9 Aunjetitzer-K. u. Hurbánovo-Typ; 10 Hatvan-K.; 11 Otomani-K.; 12 Mad'arovce-K.; 13 Nordpannonische K.; 14 Mitteldanubische Hügelgräber-K.; 15 Karpatische Hügelgräber-K.; 16 Pilinyer K.; 17 Suciu de Sus-K.; 18 Lausitzer K.; 19 Velatice-K.; 20 Čaka-K.; 21 Gáva-K.; 22 Kyjatice-K.; 23 Podoler K.

Fig. 11. Archaeological cultures of the Bronze Age in Slovakia (after Furmánek et al. 1999)

Traditionelle absolute Daten	¹⁴ C Cal.	Griechenland	Reinecke u.a.	Slowakei	Frankfurter Schule	Montelius	Hänsel	Mozsolics	Novotná	Furmánek/Veliačik
-750										
		Geometrisch	Ha B3	Späte T	Mauern	V	B VIc Bükk-szentlászló	Sitno		
			Ha B2	Späte I	Kelheim III		B VIIb Románd			
		Protogeometrisch	Ha B1	E	Kelheim II		B VIa Hajdú-böszörmény	Somotor-Lúčky		
-1000		Submykenisch/Subhelladisch	Ha A2	Mittlere Z	Langengeisling	IV	B Vc Gyermely	Trenčianske Bohuslavice		
		SMIIC/SHIIC	Ha A1	Ältere Z	Hart	SD II	B Vb Kurd	Martinček Bodrog		
-1200	-1200	SMIIB/SHIIB	Bz D	Jüngere E	Riegsee	III	B Va Aranyos	Buzica		
		SMIIIA2/SHIIIA2	Bz C/(Bz C2)	Mittlere Z	Asenkofen		B IVb Ópályi	M.Vieska		
		SMIIIA1/SHIIIA1	Bz B2/(Bz C1)	Mittlere Z	Göggenh.	II	B IVa Fornó	Ožďany		
		SMIIB/SHIIB	Bz B1	Ältere Z	Lochham	MD III	B IIIb Koszider	Dreveník II		
		SMIB/SHIIA	Bz A3	Ältere Z	Bühl	MD II	B IIIa Hajdúsámson	Dreveník I		
-1500	-1600	SMI/SHI	Bz A2	O	Langquaid	MD I	B II Kömlőd-Ercsi	Koszider		
		MMIII	Bz A1	Ältere R	Straubing	FD III	B I			
		MMII		B		FD II				
-2000	-2300									

Abbildung 1. Relative Chronologiesysteme der Bronzezeit (nach Furmánek / Veliačik / Vladár, Bronzezeit 13).

1 = Glockenbecher-Kultur; 2 = Nagyrév-Kultur; 3 = Ostslowakische Hügelgräberkultur; 4 = Nyírség-Zatín-Kultur; 5 = Chlopice-Veselé-Kultur; 6 = Košťany-Kultur; 7 = Nitra-Kultur; 8 = Wieselburger Kultur; 9 = Aunjetitzer Kultur u. Hurbanovo-Typ; 10 = Hatvan-Kultur; 11 = Otomani-Kultur; 12 = Madarovce-Kultur; 13 = Nordpannonische Kultur; 14 = Mitteldanubische Hügelgräberkultur; 15 = Karpatische Hügelgräberkultur; 16 = Pilinyer Kultur; 17 = Suciu de Sus-Kultur; 18 = Lausitzer Kultur; 19 = Velatice-Kultur; 20 = Čaka-Kultur; 21 = Gáva-Kultur; 22 = Kyjatice-Kultur; 23 = Podoler Kultur

Fig. 12. Archaeological cultures of the Bronze Age in Slovakia (after Furmánek 2006)

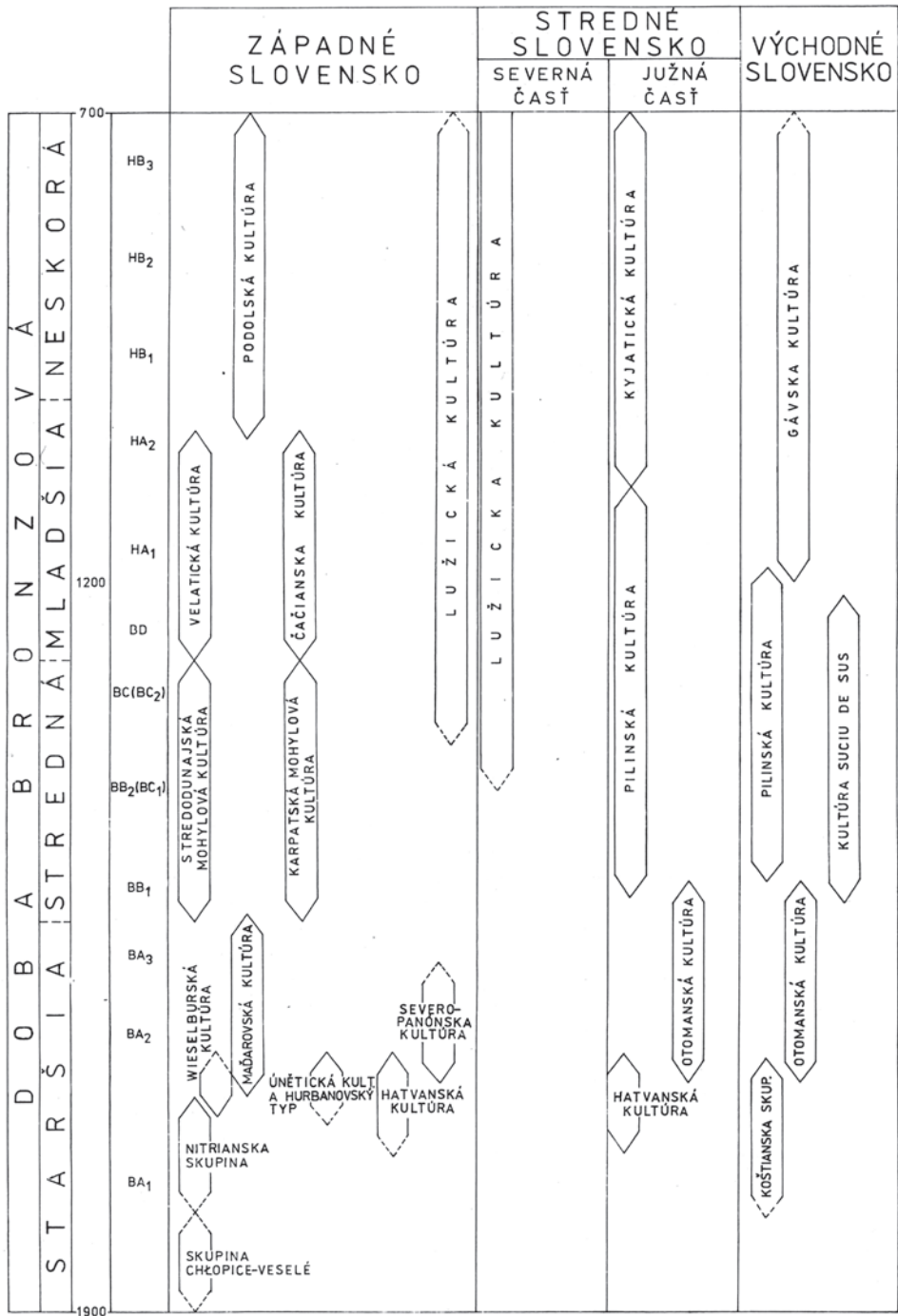


Fig. 13. Chronological table of the Bronze Age in Slovakia (after Furmánek, Veliačik 1980)

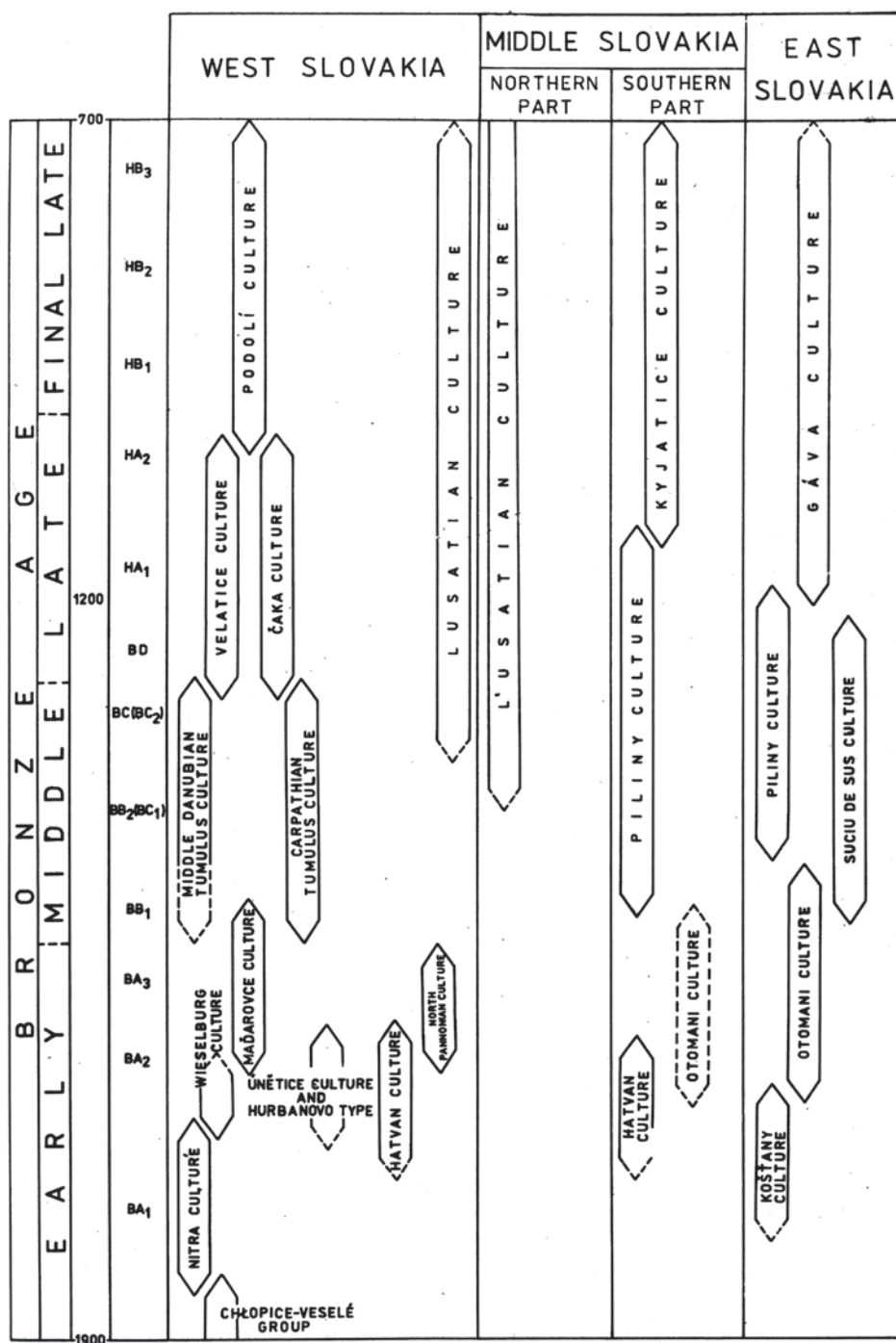


Fig. 14. Chronological table of the Bronze Age in Slovakia (after Furmánek 1981)

	Schematic synchronisation of the Urnfield cultures in Danube Basin (Furmánek 1996)											
	SW SLOVAKIA	S MORAVIA	E AUSTRIA	W HUNGARY	N CROATIA	BANAT	S HUNGARY, VOJVODINA	NW RUMANIA	N RUMANIA	E HUNGARY	S of MID. a. SLOVAKIA & N of MID. HUNGARY	N SLOVAKIA
	HB ₃	HB ₃	HB ₁	HA ₂	HA ₁	BD	BC	BB ₃	BB ₁			
B	P O D O L	P O D O L	S T I L L F R I E D I X	V A L L	V E L J K A G O R I C A	G A V A	V A L L	G A V A	G A V A	G A V A	K Y J A T I C B	L U S A T I A N C U L T U R E
R												
O												
N												
Z												
E												
A												
G												
E												

Fig. 15. Attempt at a schematic synchronisation of the Urnfield cultures in Danube Basin (Furmánek 1996)

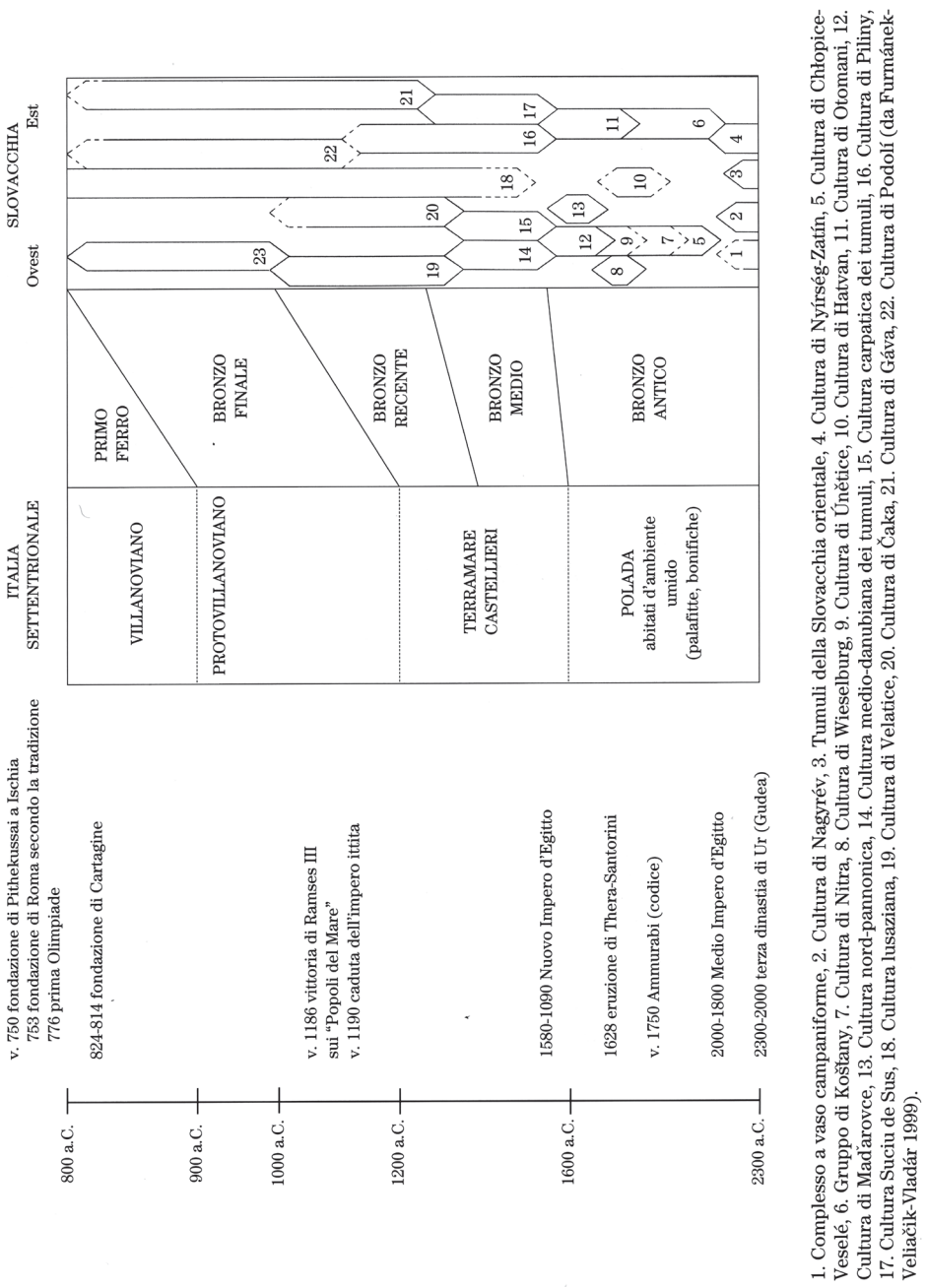


Fig. 16. Chronological and synchronisation table of Ancient civilization, North Italy and archaeological cultures of the Bronze Age in Slovakia (after Furmánek, Kruta 2002)

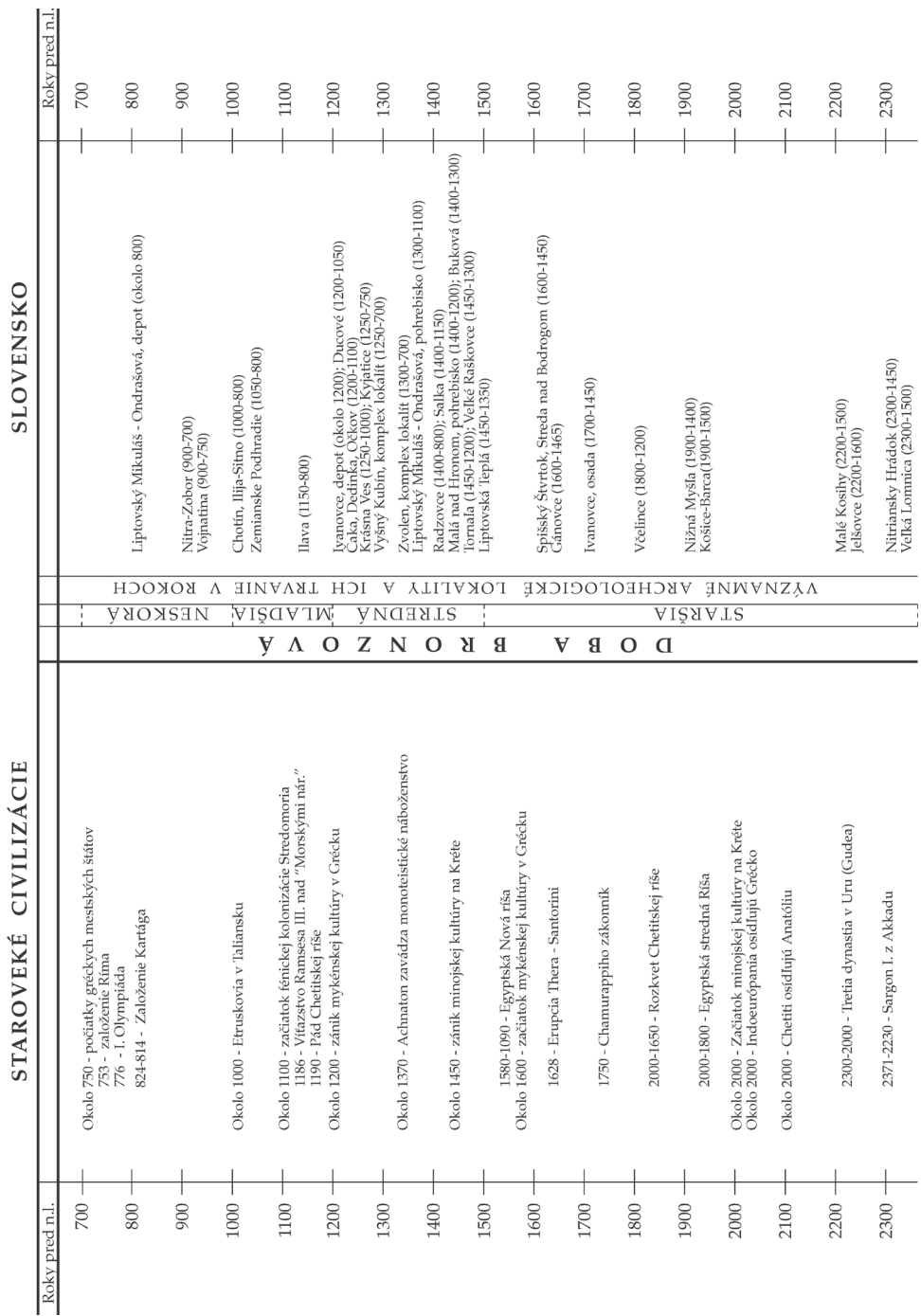


Fig. 17. Chronological and synchronisation table of Ancient civilization and the most important places of the Bronze Age found in Slovakia (after Furmánek 2004)

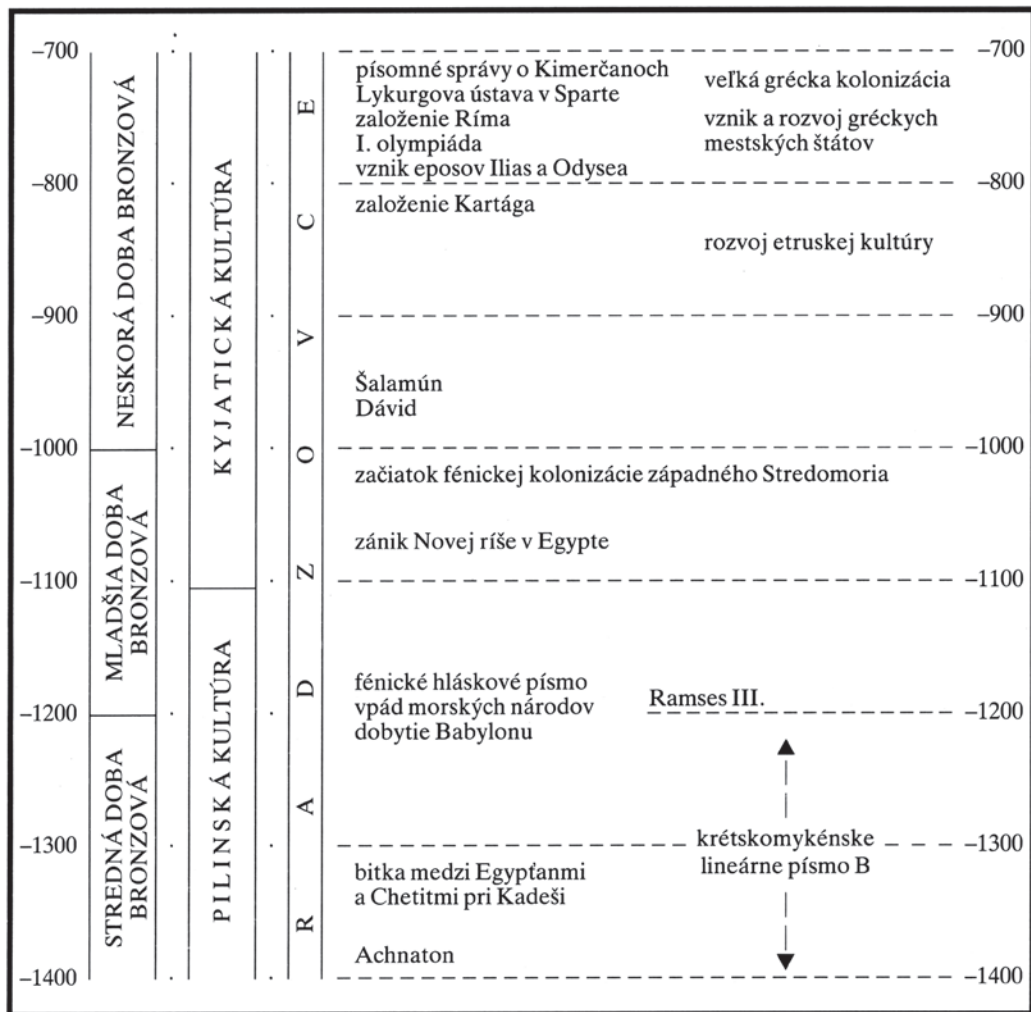


Fig. 18. Chronological and synchronisation table of Ancient civilization with settlement in Radzovce (after Furmánek 1990)

Absol. Daten v. u. Z.	Wörtliche Bezeichnung	REINECKE WILLVONSEDER HOLSTÉ TORBRÜGGE MÜLLER-KARPE	MITTELEUROPA	LAUSITZER KULTUR						MONTELIUS
				BÖHMEN	NORD-UND MITTEL- MÄHREN	NORD- UND MITTEL- SLOWAKEI	SLOWAKEI (Depots)	SCHLESISIEN		
— 800	späte	HB ₃	späte	Schlesische Kultur II	Čelechovice	Schlesische Stufe		IV	V	
		Schlesische Kultur I		Ptení						
		III b		Domamyslice II						
— 1000	jüngere	HA ₂	mittlere	III a	Domamyslice I	Übergangshorizont	Somator-Lúčky	III	IV	
		II b		Kostelec	Diviaky n.N. II	Komjatná				
		II a		Hrubčice	Diviaky n.N. II	Martinček-Bodrog				
— 1200	mittlere	BD	frühe	II a	Mostkovice	Mikušovce	Buzica-Rim. Sobota	II	III	
		I		Záhoří	Lipt. Mikuláš Ondrašová	Ožďany				
		Vorlausitzer Kultur		Hradisko C	Martin	Dreveník-Bih				
— 1400	ältere	BC (BC ₂)	jüngere		Hradisko B Bezměrov	Liptovský Michal	Koszider-Horizont	Vorlausitzer Kultur I	II	
		BB ₂ (BC ₁)				Liptovská Teplá				
		BB ₁								

Fig. 19. Synchronisation table of main chronological systems of the Bronze Age in Central Europe with periodisation of the Lusatian Culture (after Veličák 1983)

Reinecke Willwinder Holste Torbrügge	VÝCH. SLOVENSKO	RUMUNSKO	MAĎARSKO	UKRAJINA
	Somotor-Lúčky / Rohod (depoty) SOMOTORSKÁ HORA II Zemplínske Kopčany (depot) SOMOTORSKÁ HORA I Depoty: Bodrog, Blatná Polianka, Čičarovce, Zemplín, Žbince, Viničky I BARCA, VŠECHSVÄTÝCH VALALÍKY ŠEBASTOVCE BORŠA ZEMPLÍNSKE KOPČANY, BRACOVCE	MEDIAŞ LECHINŢA DE MUREŞ RECA GÁVA Depoty: Peciva, Valea lui Mihai, Cornuţel LĂPUŞ II (Gáva) LĂPUŞ I (Suciu de Sus II)	GÁVA (Taktabaj) POROSZLÓ-APONYHÁT GÁVA Depoty: Tálya, Nagykálló - Telekoldal, Gegény BERKESZ ALSÓBERECKI	MAGALA IV MAGALA III GÁVA - HOLIHRADY (Gorodnitsy, Fedorovka)
MLADŠIA DOBA BRONZOVA	HB ₁			
	HA ₂			
	HA ₁			
BD				

Fig. 21. Developmental phases of the Gáva Culture (after Demeterová 1986)

ABS. DÁTA	REINECKE a pokračovatelia	SLOVNÉ OZNAČ.	HÄNSEL	FRANKFURTSKÁ ŠKOLA
-750/ 800	HB 3	NESKORÁ		MAUERN
	HB 2			KELHEIM III
	HB 1			KELHEIM II
-1000	HA 2	MLADÁ	SD II	LANGENG.
	HA 1			HART
-1200	BD			RIEGSEE
	BC(BC2) BB2(BC1)	STREDNÁ	MD III	ASENKOFEN
	BB 1			GÖGGENH.
-1800	BA 3			LOCHHAM
	BA 2	STARÁ	FD III	BÜHL
	BA 1			LANGQUAID
-2300				STRAUBING

Fig. 22. Chronological and synchronisation table of Bronze Age in Slovakia (after Furmánek 2015)

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