

Demographic Analysis of the South-Eastern Urnfield Cultural Complex¹

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Considering its evolution parallels, the Bronze Age in Europe is legitimately perceived as a cultural and historical whole. During this period big historical populations arose with their languages, ethnic identities and religion². This holds true for the Urnfield civilization first of all. Based on their advanced economic and social level we assume individual Urnfield cultural complexes in central Europe to be a heart of civilization of European Metallicum. Rigid observance of rituals, continuity of settlement, density of sites, fortified settlements, developed pottery, advanced metallurgy of non-ferrous metals and consequent arise of iron metallurgy were significant characteristics of the period³.

Opinions concerning the arise, development and demise of Urnfields in the northern part of the Carpathian Basin have been formed from the 19th century. The present-day view on this problem was completed and clearly formulated in the last third of the 20th century and it is widely accepted now⁴.

The period around the middle of the 2nd millennium BC in central Europe was an important historical milestone. While Tumulus cultures emerged and developed in the western and partly also southern part of this region, Urnfield cultures started to be profiled in the north and east. This bipolar development was afterward united around the year 1200 BC. Tumulus cultures had been transformed into those of Urnfields and this united cultural and historical situation lasted till the 8th century BC.

In Slovakia three Urnfield cultural complexes were shaped within the period till the beginning of the Late Bronze Age, expressions of which were determined by original cultural and ethnic substratum, geography of the countryside and considerable contacts with neighbouring regions. It was the area of south-western Slovakia that inclined to central Transdanubia and to the region of western Urnfields. In archaeological terms this population used to be called the cultural complex of Mid-Danubian Urnfield. The mountainous region of northern and central Slovakia was settled by the population of Slovak branch of the Lusatian culture that was an integral part of the extensive Lusatian cultural complex spread in the northern part of central Europe. The south of central Slovakia and the east of the country were settled by the population of the South-eastern Urnfield cultural complex. This complex reached also adjacent parts of the Transcarpathian Ukraine and Hungary; in some periods of its existence it also extended to north-eastern Romania and bearers of the culture penetrated south-eastern Poland as well.

The South-eastern Urnfield cultures represent a specific cultural manifestation of the Mid-European Urnfield civilization. They are characterised by identical manifestations in the sphere of economy and spiritual life. This cultural complex started forming at the beginning of the Middle Bronze Age and it was independent and steady in its progress. The end of the complex is dated into the second half of the Final Bronze Age prevalingly and it was not coincident in all regions of its existence. It perished earlier in the southern half; in the mountainous northern area it existed till the end of the Bronze Age and in some specific regions it survived till the beginning of the Iron Age⁵.

Considering their chronology, archaeological cultures of the South-eastern Urnfield cultural complex can be divided into older ones (the Piliny and Suci de Sus cultures) and younger (the Kyjatice and Gáva cultures). As their geography is concerned, the Piliny and Kyjatice cultures represent western entities of the South-eastern Urnfield cultural complex and the Suci de Sus and Gáva cultures represent its eastern embodiment. In vertical plane these four archaeological cultures were connected to each other

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² Furmánek 2004, 13.

³ Furmánek/ Veliačik/ Vladár 1999, 69-70.

⁴ Točík/ Vladár 1971; Furmánek/ Veliačik 1980, 1987; Furmánek 1981, 1982, 1986, 1996, 2000, 2004; Kemenczei 1984; Furmánek/ Veliačik/ Vladár 1991, 1999; Furmánek/ Stegmann-Rajtár 2003.

⁵ Furmánek/ Veliačik/ Vladár 1999, 90; Furmánek 2010a, 42-44.

and in horizontal plane they influenced each other⁶.

Anthropological analyses of cremation burials dated to the Urnfield period in Slovakia have long-lasting tradition. As soon as fifty years ago a Piliny culture burial ground in Košice-*Barca* underwent an anthropological investigation⁷. Anthropological analyses of 1334 graves from the necropolis at Radzovce and 224 graves from the burial ground at Šafárikovo⁸ were an important milestone in solving the problem. The analyses were followed by palaeodemographic conclusions⁹. Later anthropological examinations at more further sites dated to the Urnfield period were done both in Slovakia¹⁰ and Hungary¹¹.

Hundreds of cremation burial grounds are known that belong to cultures of the South-eastern Urnfield cultural complex; remarkable part of them being excavated systematically or via some grave find collections. The total number of excavated cremation burials of this cultural complex represents more than 3000 graves.

To meet requirements of this article we have used almost 3000 cremation burials from eight burial grounds with an imposing number of 1681 anthropological analyses. We consider these numbers sufficient to create the basis for relevant palaeodemographic conclusions. All the burial grounds under study were situated in the western part of the South-eastern Urnfield cultural complex area. They were necropolises belonging to the Piliny and Kyjatice cultures. There were remarkably scarcely any graves of the Suci de Sus and Gáva cultures that were examined and no anthropological analyses have been made till now.

Catalogue of cremation burial grounds with anthropological analyses; total number of examined graves and number of identified individuals

- Bercel-*Sáfrányhegy II*¹²: 10 investigated graves, anthropological analyses of 8 individuals (Tab. 1; Graph 1).
- Cinobaňa¹³: 212 recently investigated graves, anthropological analyses of 205 individuals (Tab. 2; Graph 2).
- Dvorníky-*Včeláre*¹⁴: 163 investigated graves, anthropological analyses of 146 individuals (Tab. 3; Graph 3).
- Košice-*Barca*¹⁵: 72 investigated graves, anthropological analyses of 42 individuals (Tab. 4; Graph 4).
- Kyjatice¹⁶: 192 investigated graves, anthropological analyses of 54 individuals (Tab. 5; Graph 5).
- Radzovce¹⁷: 1334 investigated graves, anthropological analyses of 962 individuals (Tab. 6; Graph 6).
- Salgótarján-*Zagyvapálfalva*¹⁸: more than 1000 investigated graves; anthropological analyses of 21 individuals (Tab. 7; Graph 7).
- Silica, district Rožňava¹⁹: 13 investigated graves, anthropological analyses of 24 individuals (Tab. 8; Graph 8).
- Tornaľa-formerly Šafárikovo²⁰: 226 examined graves, anthropological analyses of 219 individuals (Tab. 9; graph 9).

⁶ Furmánek/ Veliačik/ Vladár 1999, 90; Furmánek/ Mitáš 2010a, 43; Kotorová/ Jenčová 2010, 175.

⁷ Jílková 1961; Palečková 1961.

⁸ Stloukal/ Furmánek 1982.

⁹ Furmánek 1997; Furmánek/ Stloukal 1985; 1986; Furmánek/ Veliačik/ Vladár 1991, 296-303; 1999, 171-175.

¹⁰ Benediková/ Haruštiak/ Pavelková 2010; Budinský/ Krička/ Veliačik 1986; Domonkošová Tibenská/ Nagyová/ Bodoríková 2007; Jarošová in print; Lamiová/ Schmiedlová 2009; Stloukal 1986; 1991; 2009; Tibenská/ Nagyová/ Bodoríková 2006; Veliačik 1991.

¹¹ Guba 2008; Köhler 2009; 2010.

¹² Guba 2008; Köhler 2009.

¹³ Furmánek/ Mitáš 2010b; Furmánek/ Mitáš/ Pavelková 2010.

¹⁴ Lamiová-Schmiedlová 2009; Stloukal 2009.

¹⁵ Jílková 1961; Palečková 1961.

¹⁶ Furmánek 1986; Pavelková 2011.

¹⁷ Stloukal/ Furmánek 1982; Furmánek/ Stloukal 1985; 1986.

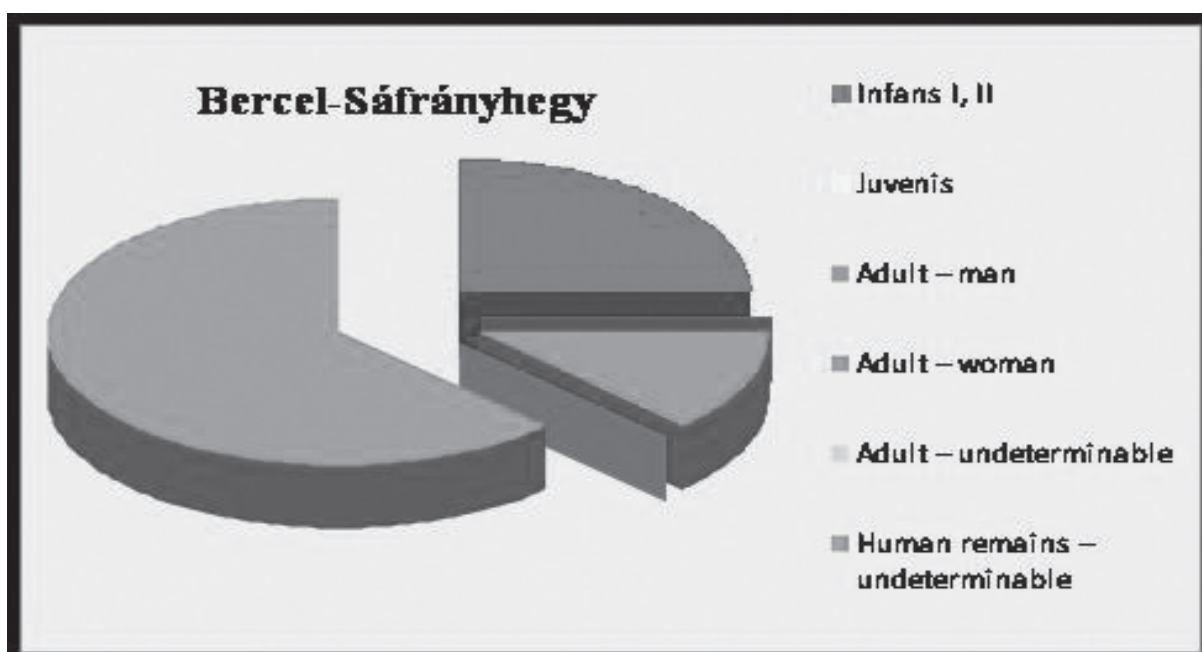
¹⁸ Kemenczei 1984, 107, 134-135; Guba 2010; Köhler 2010.

¹⁹ Hreha 2012, in print

²⁰ Furmánek 1977; Stloukal/ Furmánek 1982; Furmánek/ Stloukal 1985, 1986.

The age group	N	%
Infans I, II	2	25,00
Juvenis	0	
Adult – man	0	
Adult – woman	1	12,50
Adult – undeterminable	0	
Human remains – undeterminable	5	62,50
Total	8	100,00

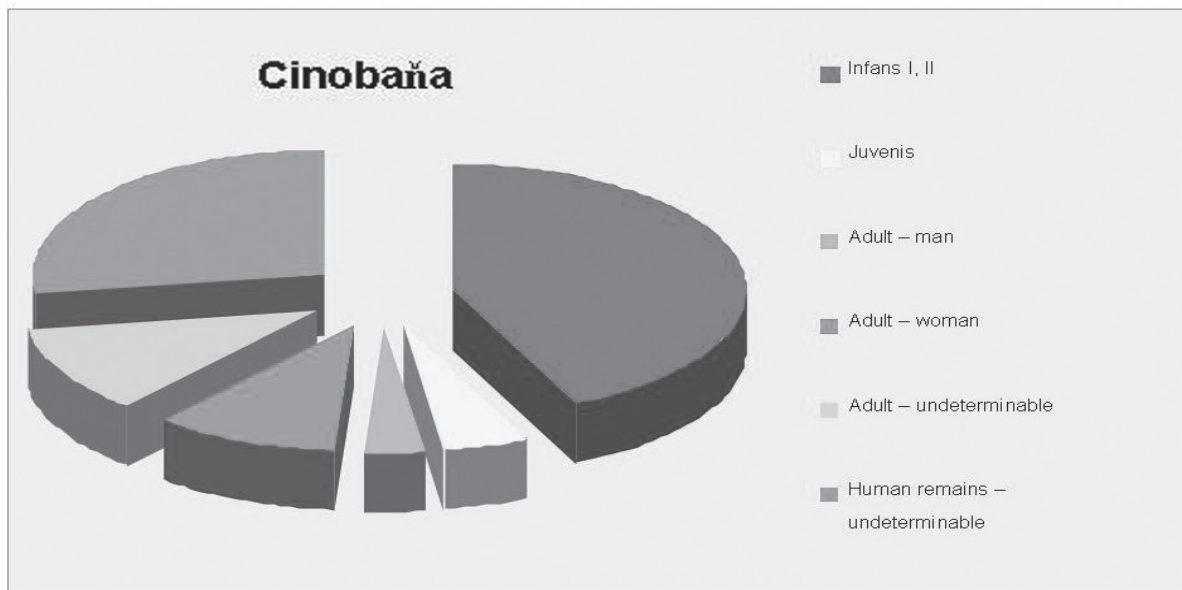
Tab. 1. Bercel-Sáfrányhegy II. Dividing of identified individuals into age groups



Graph 1. Bercel-Sáfrányhegy II. Dividing of identified individuals into age groups

The age group	N	%
Infans I, II	88	42,94
Juvenis	10	4,88
Adult – man	7	3,42
Adult – woman	21	10,23
Adult – undeterminable	23	11,22
Human remains – undeterminable	56	27,32
Total	205	100,00

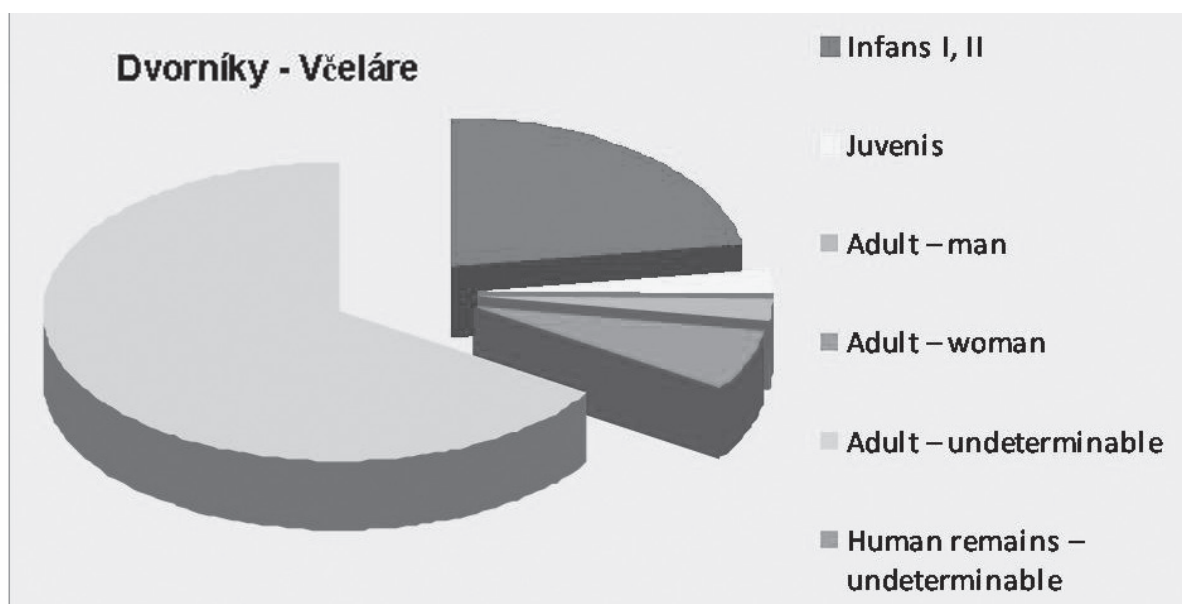
Tab. 2. Cinobaňa. Dividing of identified individuals into age groups



Graph 2. Cinobaňa. Dividing of identified individuals into age groups

The age group	N	%
Infans I, II	33	22,60
Juvenis	4	2,74
Adult – man	3	2,06
Adult – woman	10	6,85
Adult – undeterminable	96	65,75
Human remains – undeterminable	0	
Total	146	100,00

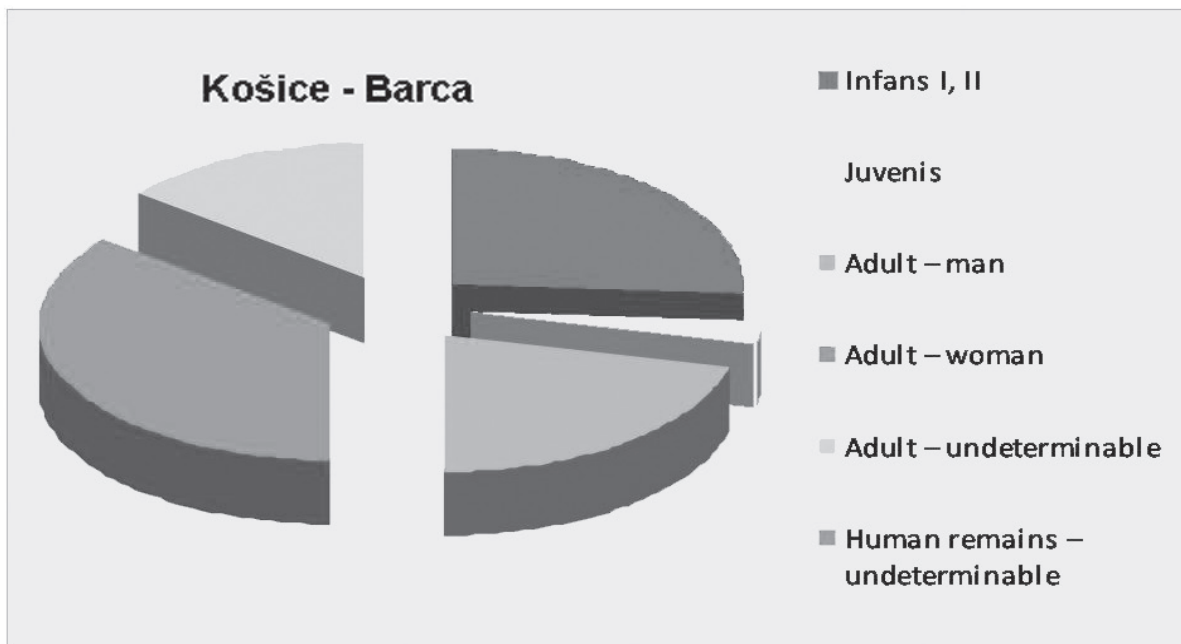
Tab. 3. Dvorníky-Včeláre. Dividing of identified individuals into age groups



Graph 3. Dvorníky-Včeláre. Dividing of identified individuals into age groups

The age group	N	%
Infans I, II	11	26,19
Juvenis	1	2,38
Adult – man	9	21,43
Adult – woman	15	35,71
Adult – undeterminable	6	14,29
Human remains – undeterminable	0	
Total	42	100,00

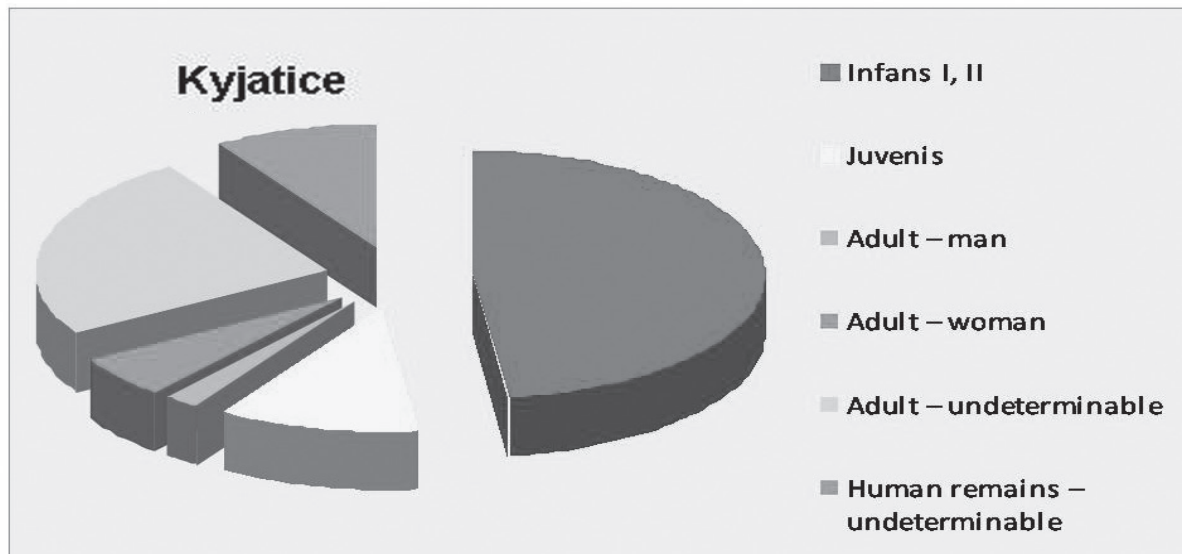
Tab. 4. Košice-Barca. Dividing of identified individuals into age groups



Graph 4. Košice-Barca. Dividing of identified individuals into age groups

The age group	N	%
Infans I, II	26	48,15
Juvenis	6	11,11
Adult – man	1	1,85
Adult – woman	3	5,56
Adult – undeterminable	13	24,07
Human remains – undeterminable	5	9,26
Total	54	100,00

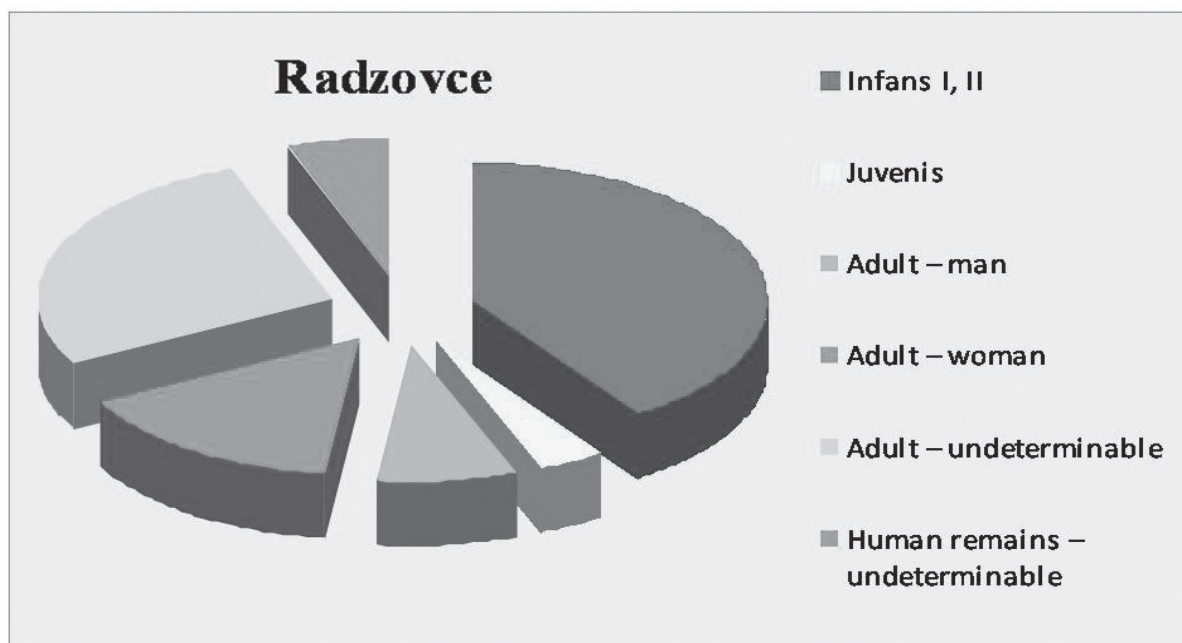
Tab. 5. Kyjatice. Dividing of identified individuals into age groups



Graph 5 Kyjatice. Dividing of identified individuals into age groups

The age group	N	%
Infans I, II	391	40,65
Juvenis	34	3,53
Adult – man	75	7,80
Adult – woman	148	15,38
Adult – undeterminable	261	27,13
Human remains – undeterminable	53	5,51
Total	962	100,00

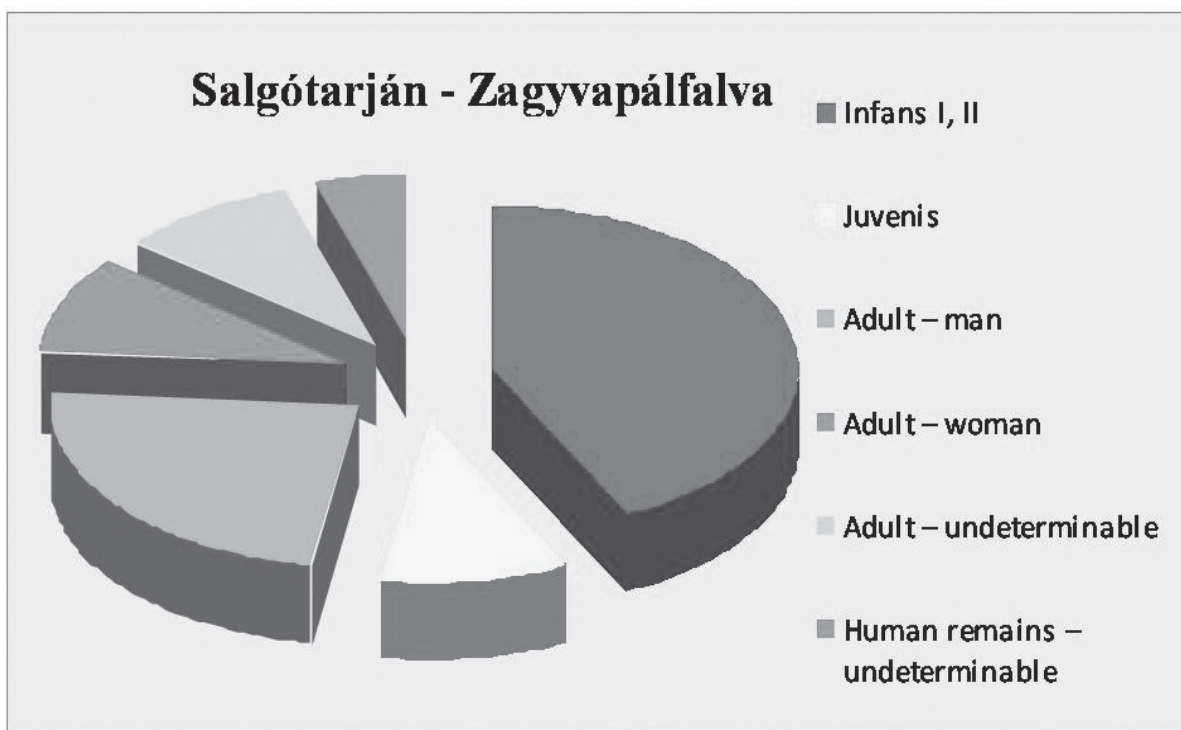
Tab. 6. Radzovce. Dividing of identified individuals into age groups



Graph 6. Radzovce. Dividing of identified individuals into age groups

The age group	N	%
Infans I, II	9	42,86
Juvenis	2	9,52
Adult – man	5	23,81
Adult – woman	2	9,52
Adult – undeterminable	2	9,52
Human remains – undeterminable	1	4,75
Total	21	100,00

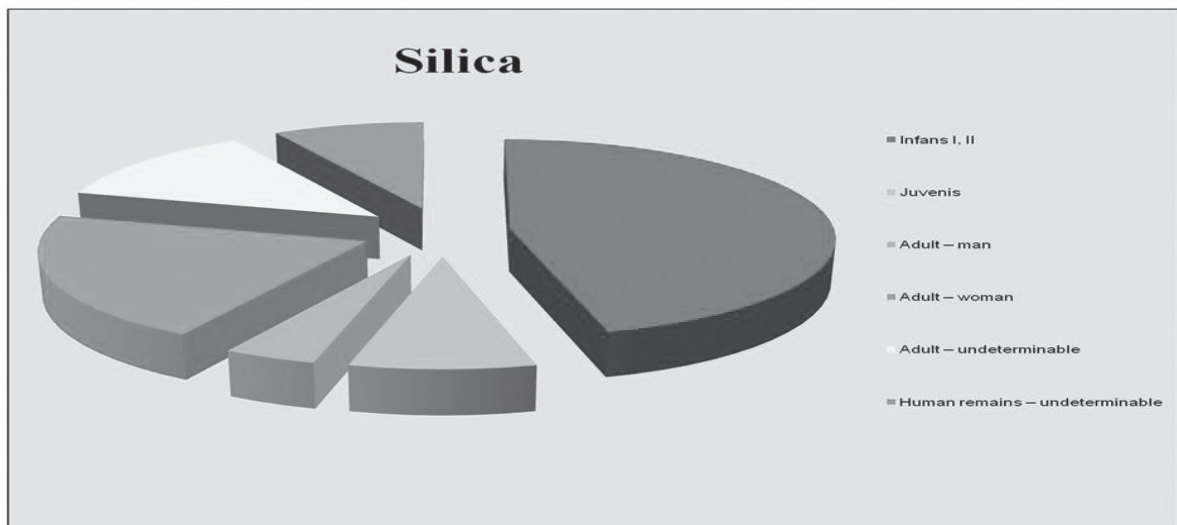
Tab. 7. Salgótarján-Zagyvapálfalva. Dividing of identified individuals into age groups



Graph 7. Salgótarján-Zagyvapálfalva. Dividing of identified individuals into age groups

The age group	N	%
Infans I, II	11	45,84
Juvenis	2	8,33
Adult – man	1	4,17
Adult – woman	5	20,83
Adult – undeterminable	3	12,50
Human remains – undeterminable	2	8,33
Total	24	100,00

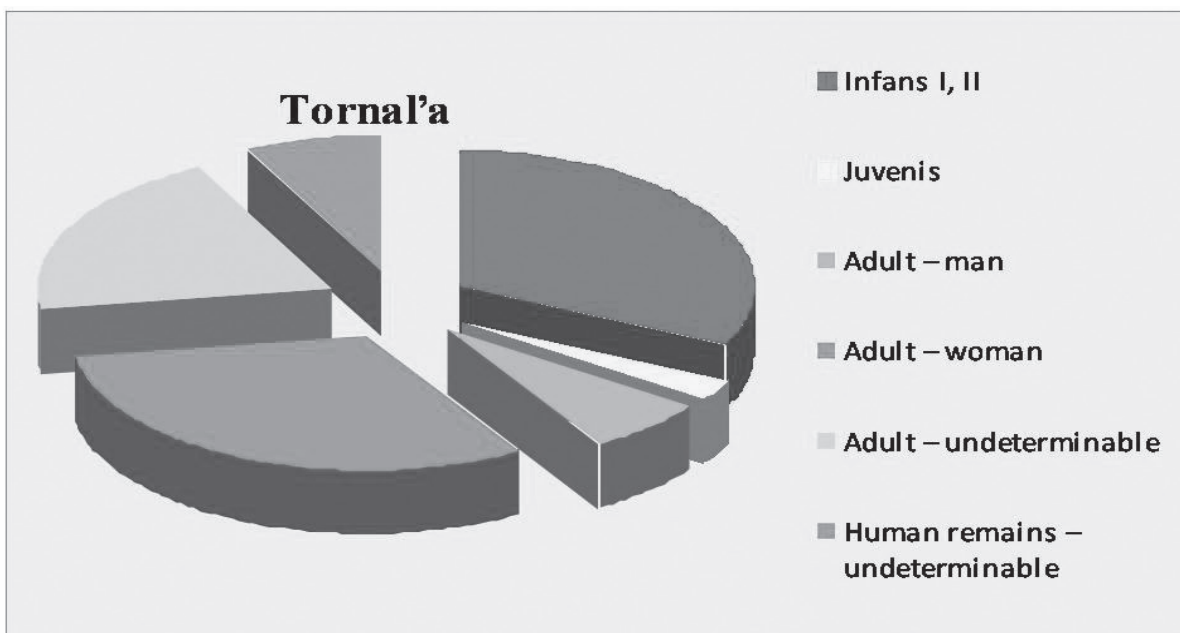
Tab. 8. Silica. Dividing of identified individuals into age groups



Graph 8. Silica. Dividing of identified individuals into age groups

The age group	N	%
Infans I, II	70	31,97
Juvenis	5	2,28
Adult – man	15	6,85
Adult – woman	67	30,59
Adult – undeterminable	46	20,01
Human remains – undeterminable	16	7,30
Total	219	100,00

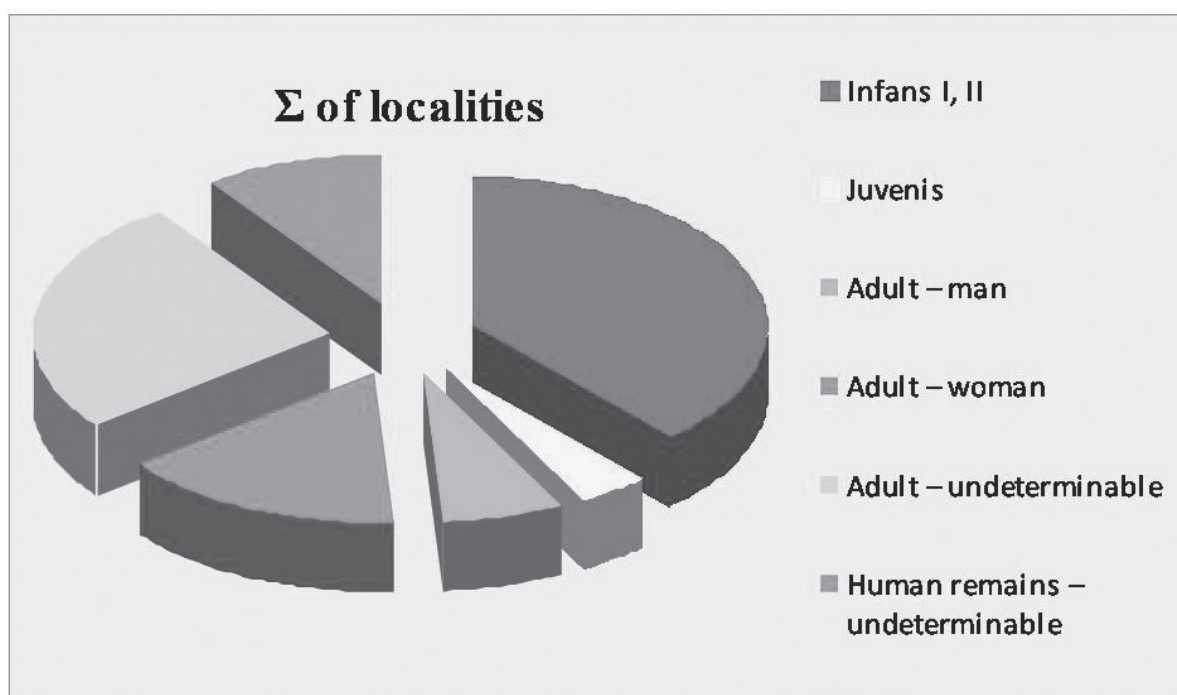
Table 9. Tornaľa. Dividing of identified individuals into age groups



Graph 9. Tornaľa. Dividing of identified individuals into age groups

The age group	N	%
Infans I, II	641	38,13
Juvenis	64	3,81
Adult – man	116	6,90
Adult – woman	272	16,18
Adult – undeterminable	450	26,77
Human remains – undeterminable	138	8,21
Total		100,00

Tab. 10. Summary of dividing of identified individuals into age groups
(Infans I, II; Juvenis; Adults; Unidentified)



Graph 10. Summary of dividing of identified individuals into age groups
(Infans I, II; Juvenis; Adults; Unidentified)

The presented dividing into age groups is a product of age dividing of individual anthropologists, starting with H. Palečková²¹, via M. Stloukal²² to J. Pavelková²³. In this article we made an effort to integrate age diapasons in a way to create a general analysis that would reflect contemporary conclusions and will be objective. Yet the numbers of non-adults, adults and those of unidentifiable individuals sometimes is not corresponding with results of anthropological analyses of completely excavated cremation burial grounds of the Urnfield cultures in Slovakia²⁴.

Cremation contents of majority of graves are illustrative in showing that cremation technology has been gradually advanced from the Middle Bronze Age. At the beginning of cremation corpses were cremated imperfectly, thereafter members of communities that were very skilful in production and metallurgy of bronze and then iron were incinerated. Maybe their knowledge and experience had been applied and reflected when a pyre was erected, in which high temperature was reached to influence the quality of burning of the deceased. Specificities of funeral rites are reflected also in the repeatedly docu-

²¹ Palečková 1961.

²² Furmánek/ Stloukal 1982.

²³ Pavelková 2010.

²⁴ Furmánek/ Veliačik/ Vladár 1991, 301; 1999, 174.

mented fact that after creation burnt bones were sometimes crushed.

Although burnt human bones from cremation burials are not of such information value as osteological finds from inhumation necropolises, they bring interesting reconstructions of demographic conclusions. In comparison with inhumation burial grounds of the Early Bronze Age their information value is smaller, but really all the dead appear to be buried at cremation burial grounds. At inhumation necropolises children are missing remarkably, who died during child delivery or to one year of their age.

We have to be aware of the fact that evidentiary material having good information value can be gained only from fully excavated burial grounds. There are rather many of them in the area of the South-eastern Urnfield cultural complex. Their anthropological and subsequent palaeodemographic analyses revealed that the average life length ranged from 22.5 to 29.5 years of age. The rather great number of individuals, who lived less than 15 years (more than 40%) was striking.

Conclusion

The presented article is representing only an introductive anthropological and demographic analysis of the South-eastern Urnfield cultural complex. In it further possibilities of interdisciplinary co-operation in this sphere are implied. More of significant outputs for formulating of relevant palaeodemographic statements are presumed to be published gradually.

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