

ON PROBLEMS OF ABSOLUTE CHRONOLOGY OF THE EARLY BRONZE AGE IN SOUTHWESTERN SLOVAKIA

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Abstract. This contribution treats new notion about the absolute chronology of Early Bronze Age in southwest Slovakia. Based on the series of new ^{14}C data from the burial place in Jelšovce, which had been done by J. Görsdorf from Radiocarbon Laboratory of German Archaeological Institute (Deutsches Archäologisches Institut) in Berlin we can date the early phase of Nitra culture to the time period 2200/2150 BC. The time period of transition between Nitra and Únětice cultures 1930-1870 BC and of the classical phase of Únětice culture 1870-1730 BC. The transition between Únětice and Mad'arovce culture was approximately in the time period around 1730 BC.



1. INTRODUCTION

Investigations on the Early Bronze Age in the region of central Europe have been intensified remarkably in the last 20 years. Together with extent field archaeological researches realised also on the territories of Poland and Slovakia, this intensity has been manifested in co-operation with specialised laboratories needed for various analyses, too. To the most important of them we can include also analyses of samples used for absolute dating by the ^{14}C method, results of which are not only complementing but even changing our contemporary knowledge on dating of particular archaeological cultures with its origin mainly in results of relative chronology. Owing to absence of absolute data gained by the ^{14}C method, chronology of the Early Bronze Age in Slovakia has been worked out firstly by means of conventional absolute dating based on east-mediterranean one. So e.g. in synchronisation of cultures from the Early-Bronze Age later period, pieces of knowledge were used that were gained by synchronisation of the Minoan and Late Helladic periods with Egyptian history, on the basis of which Micenean mass/graves were dated according to higher chronology from 1570-10 to 1515/05 and according to lower one from 1550-10 to 1490/80 years BC (Furmánek *et al.*, 1991).

From the Early-Bronze Age earlier period only 5 dates of ^{14}C have been known to 1994 from the Nitra- and Únětice culture cemetery in Branč (Gerloff, 1993). Later period of the Early Bronze Age, that is presented on the territory of south-western Slovakia mainly by the Mad'arovce culture, was documented by 12 ^{14}C dates. They were data from objects in fortified sites Bučany, Hoste, Rybník and Vráble (Furmánek *et al.*, 1991; Görsdorf, 1993).

2. JELŠOVCE SITE

Thanks to the close co-operation of the Institute of Archaeology in Nitra with J. Görsdorf from the ^{14}C Labor Deutsches Archäologisches Institut Berlin, the above group of dates has been recently enlarged by 13 new ones (Görsdorf, in print). They are dates gained from skeletal material excavated in the Early-Bronze Age cemetery in Jelšovce, south-western Slovakia (Bátora, 2000). Great importance of these dates is underlined by the fact, that in Jelšovce there were in 1982-1987 616 graves from the Early Bronze Age excavated, belonging to three cultures following each other: the Nitra (187 graves), Únětice (118 graves) and Mad'arovce (311 graves) cultures, that are representing the whole cultural and historical evolution of the period under research on the territory of south-western Slovakia (Bátora, 2000). This fact has also served a key in selection of samples for dating. Dating material were human bones (content of collagen), that were taken only from archaeologically well-dated graves and from all parts of cemeteries at the same time.

Results of the excavations in Jelšovce together with those in Mýtina Nová Ves (J. Bátora's unpublished excavations), where 550 graves of the Nitra and Únětice cultures were revealed, have brought number of new information answering some questions in our recent knowledge.

As it is known, after vanishing of particular cultures of the late-Aeneolithic cultural complex, the Chłopice-Veselé culture was spread at the beginning of the Bronze Age over a big territory from upper Dnester, Little Poland, and Upper Silesia to eastern Moravia. In the newest works of Polish researchers S. Kadrow and A. and J. Machnik (Kadrow *et al.*, 1992) and S. Kadrow and J. Machnik (Kadrow *et al.*, 1997), the authors give

up the term „the Chłopice-Veselé, culture” replacing it with „the protomierzanowice phase of the mierzanowice culture”. They explain the change of denotation with chronological non simultaneity of material from Chłopice and Veselé, dating pottery from Chłopice to the proto-mierzanowice phase (I) and that from Veselé to the early-mierzanowice phase (II) of the Mierzanowice culture (Kadrow *et al.*, 1997). The given chronological sequence is not based on results of absolute dating, but it has its origin in analysis of pottery corded decoration. The shift in dating of the Veselé pottery according to the given idea makes the beginning of the Bronze Age as well as following development of the Nitra culture on the territory of south-western Slovakia 200 till 250 years younger than that in Little Poland and eastern Moravia (Kadrow, 1996, 1997). The results of analyses of several samples from the Jelšovce cemetery, using the ^{14}C method, do not confirm but controvert the opinion. According to them the beginning of the Nitra culture goes back to the period of 2200/2150 BC, coinciding with the early phase (II) of the Mierzanowice culture, that is by S. Kadrow dated as 2150/2100-2050 BC. It is necessary to say in this context, that the already known absolute data of the Nitra culture from Branč (2137-1972 BC) considered by S. Kadrow as main starting point for later dating of the Nitra culture in comparison with the Mierzanowice culture have its origin in graves do not representing its early phase, but old and classic ones and the sample GrN-12820 from the grave 255 in Branč (1822-50 BC) belongs up to the period of classic phase of the Únětice culture (Kadrow, 1997; Vladár, 1973). As it follows from the above mentioned, the early phase of the Nitra culture was simultaneous with the early phase of the Mierzanowice culture (phase II) and the type Veselé, or proto-Nitra phase coincides with that of Chłopice or with the phase I of the Mierzanowice culture. So there is no reason to date beginning of the Nitra culture on the territory of south-western Slovakia and eastern Moravia later than the beginning of the Mierzanowice culture in Little Poland. Besides the results of absolute dating, this opinion is supported also by presence of a ball-shaped pot with tongue-shaped protrusions under its edge in the grave 308 of the Nitra culture cemetery in Mýtna Nová Ves, exactly analogically with pottery of the early-Mierzanowice phase of the Mierzanowice culture at the site of Iwanowice „Babia Góra” (Kadrow, 1991). The grave, that according to its inventory (copper knife of the willow-leaf shape, silex point and wrist-guard) could be dated to the Nitra culture early phase, is considered a relevant evidence of close contacts of the Nitra and Mierzanowice cultures in their early developmental phases. Alas we do not have any absolute data ^{14}C from the grave 308 now.

The situation at the end of the Nitra and Mierzanowice cultures was quite different – the Mierzanowice culture lasted obviously later than the Nitra culture, that was replaced by the Únětice culture in south-western Slovakia within the second half of the Reinecke's stage BA1.

Transitional period between the Nitra and Únětice cultures, the Nitra-Únětice phase, is on the territory of south-western Slovakia on the basis of ^{14}C dating method of graves from Jelšovce dated to 1930-1870 cal BC and the classic phase of the Únětice culture to 1870-1730 BC (Görsdorf, 2000). Inventory of the Únětice culture graves in Jelšovce supported correctness of the absolute dating. The graves 311 and 313 situated in a central group of graves at the Únětice culture cemetery belonged to the Nitra-Únětice phase and the graves 329 and 410 situated in eastern or western group of graves were younger – they belonged to the Únětice culture classic phase. Comparing these dates with those of the Únětice culture classic phase e.g. from Poland (Łęki Małe, Przesławice) and from Moravia (Velké Pavlovice and Blučina) we find they are close or equal. Comparing them with dates of the classic Únětice culture in eastern Germany (Quenstedt) we find the dates from Jelšovce later (Rassmann, 1996).

Final phase of the Únětice culture in south-western Slovakia is represented by pottery with remarkably present feature of the Mad'arovce culture following the Únětice culture. Analyses of samples from Jelšovce date the transition between the Únětice and Mad'arovce cultures about the year 1730 BC. According to results of analyses of 12 samples from fortified sites of the Mad'arovce culture (Bučany, Hoste, Rybník nad Hronom), their settlement lasted in 1770-1430 BC (Görsdorf, 1993). At the Mad'arovce culture cemetery in Jelšovce deads stopped to be buried at about 1500 cal BC (Görsdorf, 2000). Comparison of the Mad'arovce culture dates from south-western Slovakia with those of related the Věteřov culture in Moravia shows almost entire correspondence in lasting of the both cultures. This is evidenced by radiocarbon dates from Blučina and Velké Opatovice (Rassmann, 1993). Two dates from Budkovice (Bln-3284, Bln-3283) are older only partially. Comparison with the Věteřov culture dates from the region of Lower Austria shows a part of dates from the site of Buhuberg is almost identical with dating of the Mad'arovce culture in south-western Slovakia and the other part is little older-like 2 dates from the site of Guttenbrunn (Rassmann, 1993). Prevailing amount of dates from the Böhmeimkirchen group of the Věteřov culture in Austria is identical with dating of the Mad'arovce culture (Rassmann, 1993).

3. CONCLUSION

Comparison of dating of the Mad'arovce or Věteřov cultures with radiocarbon data of the Nowa Cerekwa group spread on the territory of the Upper Silesia in Poland shows that the Nowa Cerekwa group is older as the whole (Rassmann, 1993). Only its final phase coincides with the Únětice-Mad'arovce phase of the Mad'arovce culture. This is also documented by several common pottery shapes (Gedl, 1964). But bronze artefacts typical for the Lochham horizon of bronzes already did not appear in bronze industry of the Nowa Cerekwa group.

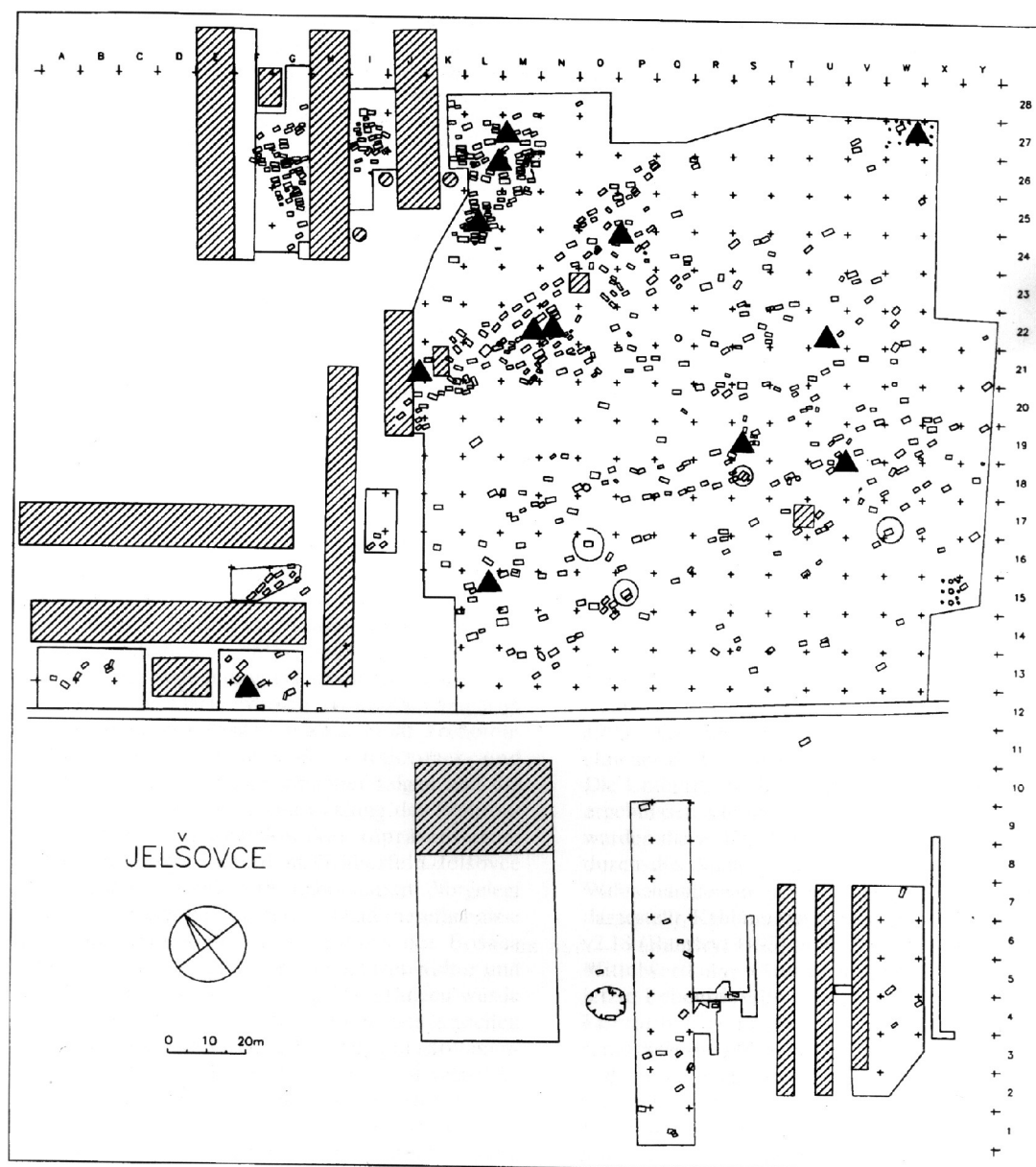


Fig.1. A plan of burial place in Jelšovce with signed graves dated by ^{14}C method.

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