

New data on cremation burials from North-Eastern Slovenia

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Zusammenfassung

NEUE DATEN ZU BRANDBESTATTUNGEN AUS DEM NORD-ÖSTLICHEN SLOWENIEN. Die Untersuchung zahlreicher archäologischer Fragen ist ein endloser Prozess, der stets evaluiert werden muss, wenn neue Daten einlangen. In diesem Fall waren die Resultate der osteologischen Analyse des Knochenmaterials aus urnenfelderzeitlichen Gräbern aus dem nordöstlichen Slowenien ein bedeutender neuer Beitrag für die Forschung. Bei der Korrelation mit den archäologischen Befunden konnte ein weiterer Schritt zum besseren Verständnis der untersuchten Population(en) gemacht werden. Ob die Interpretationen korrekt sind oder nicht, ist in jedem Fall zu diskutieren. Aber es ist eine Tatsache, dass die untersuchten Populationen von Pobrežje, Miklavž, Ormož und anderen Friedhöfen im nordöstlichen Slowenien stratifiziert waren und manche Konturen ihres Lebens nachgezeichnet werden können, was vor einiger Zeit noch unmöglich erschien.

Abstract

The research on numerous archaeological topics is a never-ending process which must be re-evaluated whenever new data arrive. In this case, the results of the osteological analysis of the bone material from the Urnfield period graves from north-eastern Slovenia were a major new contribution to our research. By their correlation with the archaeological data we have made a step further towards a better understanding of the population(s) studied. Whether our interpretations are correct or not is in any case arguable, but we cannot overlook the fact that the populations researched from Pobrežje, Miklavž, Ormož and other cemeteries in north-eastern Slovenia were stratified and that we are tracing some of the contours of their life which seemed to be out of our reach some time ago.

1. Introduction

Due to numerous and extensive construction projects being carried out in Slovenia the last two decades have brought to light a great number of new archaeological sites, many of which lay in the area of our focus, i.e. north-eastern Slovenia.¹ But although we can count the new settlements preliminarily dated to the Late Bronze Age in tens, the number of contemporary cemeteries is only five (Fig. 1), with four of them not exceeding the number of ten graves.² However, since the excavation techniques have developed greatly over the past decades, the recently excavated graves have also shed some new light on the burial rites of the Ruše group of the late Urnfield period. Furthermore, additional information has been gained from some recent projects which, on the one hand, enabled the osteological analysis of burned human and animal bone material retrieved from the graves,³ and on the other hand the radiocarbon dating of

1. An overview of all the excavations can be found in PREŠEREN 2004, while entire publications of individual sites can be found online: <http://www.zvkds.si/en/kulturna-dediscina-slovenije/publikacije/kategorije/4/>, letzter Zugriff 26.6.2011.

2. Nova Tabla (TIEFENGRABER 2001, 82. – GUŠTIN, TIEFENGRABER 2001, 110) – one grave (or ritual pit), Spodnja Hajdina – six damaged graves (LUBŠINA-TUŠEK 2001), Gotice pri Turnišču (PLESTENJAK 2010) – four graves, Miklavž na Dravskem polju (unpublished) – ten graves, Zavrč (unpublished) – 57 graves.

3. The human bone material was analysed by J.-L. Thomas from the Department of Archaeology at the School of History, Classics and Archaeology at the University of Edinburgh, whereas the animal bones were analysed by B. Toškan from the Inštitut za Arheologijo Znanstveno raziskovalnega centra Slovenske akademije znanosti in umetnosti (Institute of Archaeology at the Scientific-Research Centre of the Slovenian Academy of Sciences and Arts).

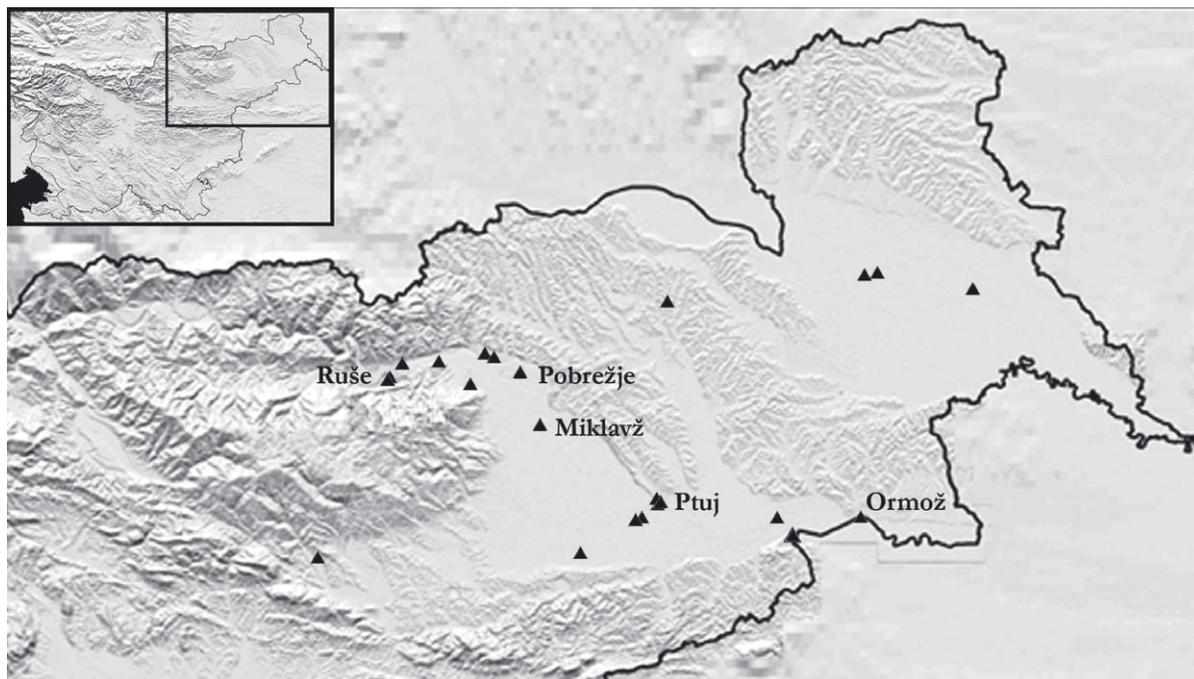


Fig. 1. Map of Urnfield period cemeteries in north-eastern Slovenia.

the burned bone material, which can be counted among the latest and most interesting developments in the field.⁴

The cremation burial rite in the area researched was re-introduced in the late Middle Bronze Age/Initial Urnfield period transition, i.e. Br C/Br D,⁵ but it is in fact from the phases Ha A/beginning of Ha B when the cremation burials are encountered in large numbers in extensive cemeteries on the main plains especially Drava and Mura (Fig. 1). Many of them were, however, excavated with very little documentation being left behind;⁶ nevertheless sufficient grave-con-

texts have been published to ensure that the broader picture and some specific aspects of the Urnfield period in this region can be discussed.⁷

The new excavated material, bringing in turn new information, encouraged us to take a step back, to re-evaluate the work carried out and to plan the future steps for an up-to-date study of the Urnfield period in NE Slovenia. In addition to publishing the new excavations we are trying to republish some of the older material, which for one reason or another has not yet reached that stage. As we want to address more questions regarding the division of the society and the ritual practices expressed in the graves, we have interlinked with other sciences to retrieve as much specific information as possible.

This article is not the presentation of the final results of our research; it is much more an intermediary review of our project.

2. Tracing the burying ritual and the social connotations

Despite intensive work on the comprehension of the social structure and the rituals of the Urnfield period in NE Slovenia, we always encountered the lack of the osteological analyses of bones from the graves as one of the major draw-

4. The results of the radiocarbon dating are still being analysed and to date are not yet ready for publication.

5. JEVREMOV 1989.

6. On the one hand we have Ruše I, excavated in 1879 by A. Müllner and G. Wurmbbrand, where every detail of the graves was observed and documented, although detailed plans are not available (WURMBRAND 1879. – MÜLLER-KARPE 1959), and some others like Pobrežje (PAHIČ 1972. – PAHIČ 1991), Brinjeva gora (PAHIČ 1989), Ruše II (PAHIČ 1957. – ČREŠNAR 2006) and Ormož (TOMANIČ-JEVREMOV 1989.), which were also properly excavated although not all of them have been published in full. On the other hand we have Maribor (MÜLLER-KARPE 1959, 115–116 and Tafel 118–121. – PAHIČ 1968, 23–24 and footnotes 74–75), with around 320 graves the largest excavated cemetery of the Ruše group, Zgornja Hajdina (STARE 1950. – MÜLLER-KARPE 1959, Tafel 116–117) and others, where besides the finds, very little or only dubious information is left behind.

7. TERŽAN 1985. – TERŽAN 1987. – TERŽAN 1995. – TERŽAN 1999. – ČREŠNAR 2006.

backs for our research. The situation has changed thanks to our collaboration with the University of Edinburgh, as in 2006 Jayne-Leigh Thomas, at that time a PhD student, came to study the cremated bone remains from NE Slovenia. The results, which we have incorporated in our archaeological research⁸ are very interesting and shed new light on some aspects of our research.

The osteological analysis was carried out on bones from a total of 178 cremations from five different cemeteries in north-eastern Slovenia dated to the Urnfield period: Pobrežje near Maribor (77 cremations), Gračič below Brinjeva gora (66 cremations), Ruše II (26 cremations), Miklavž (8 cremations) and Ptuj – Potrčeva ulica (1 cremation).⁹

Each bone sample, with its cremation features, has provided useful data about the way of cremation, i.e. the intensiveness and duration of fire, whereas other information was not always obtained. Whilst the broader age determination was possible for 128 individuals (72%), the sex of the individual could only be determined in 8 cases (4.5%). There were also 9 individuals (5%) with determined pathologies. Besides human remains 33 graves (18.5%) also included remains of charred animal bones; but bare statistics do not reveal all the facets of the rituals, which can only be extracted by individual observation and evaluation of the results in combination with different analyses.

3. The Initial Urnfield period

As already noted, the vast majority of the cemeteries in NE Slovenia can be dated to the Late Urnfield period (Ha B), with their beginnings in the Ha A/Ha B transition. Only one of them, at Potrčeva cesta in Ptuj, where only three graves were excavated, can be dated to the very beginning of the Urnfield period in the region, which is contemporary with phase I of the Virovitica group in North-

ern Croatia, i.e. Bz C/D, in the central-European sense.¹⁰ Moreover, it is important because it lies in the vicinity of one of the most important settlements in the region for that period of time, at Rabelčja vas near Ptuj.¹¹

On the basis of only three graves we are unable to trace the rituals and the social structure, but some observations still have to be noted. The graves all contain urns, for which a pot or a jug was used, and at least one additional ceramic vessel, but no metal objects. Moreover, graves 2 and 3 contain pottery fragments, with which the urn in grave 3 is also covered. Moreover, the same two graves contain one vessel which was turned upside down. It did not cover another vessel, but possibly some other grave-goods, which at the time of excavation no longer existed, e.g. parts of “the mortuary feast” or “the final ration”.¹²

Only remains from grave 1 were available for osteological analysis. The 40 g of burned bone yielded very little information, but it could be established that the deceased was exposed to constant low temperatures from 200°C–300°C. It would appear that the bones were burned just long enough to remove the flesh, and then the remains were removed from the direct heat.

Another contemporary cemetery was recently excavated at Podsmreka in Dolenjsko (SE Slovenia), but the site organization that we can observe is completely different.¹³ The five graves, excavated inside the settlement, were badly damaged, but four of them were still well enough preserved to provide interesting information. In all of them the human remains were found collected in an urn, which, on two occasions, was covered with a dish. All the graves contained numerous fragments of pottery; some of them even burned. This may lead us to the assumption that some of the pots were placed on or near the pyre, where the deceased was cremated.

If we also examine the distribution of the graves, we can observe three groups with two pairs of graves and one single grave. It becomes even more interesting if we compare the urns in the first pair, graves 1 and 2, where they were matching in shape and ornament, i.e. nipples bounded by a groove on the broadest parts of the vessel. Both of the deceased were children at an approximate age of 2–4 years. Grave 4, which together with grave 3 formed the

8. THOMAS 2009.

9. We are using the word cremation/-s not as a determinative for one grave or even one burned individual: it is actually the number of samples. If one grave contained several urns which contained bones we kept them separated, although we could not say whether these are of multiple individuals or of a single individual. Of all the cremations analysed by date in eastern Slovenia, only grave 10 from Miklavž clearly contained the remains of two individuals. One of the individuals is a perinate and the other individual was aged 14–21 years.

Data by graveyard: Pobrežje near Maribor (77 cremations from 71 graves), Gračič below Brinjeva gora (66 cremations from 58 graves), Ruše II (26 cremations from 20 graves), Miklavž (eight cremations from eight graves, while one cremation contained two individuals) and Ptuj – Potrčeva ulica (one cremation from one grave).

10. JEVREMOV 1989. We are aware of the possible beginning of the Virovitica culture group already in the Late Bz B (TERŽAN 1995, 324–327. – TERŽAN 1999, 133).

11. STRMČNIK-GULIČ 1989.

12. JEVREMOV 1989.

13. MURGELJ 2008.

second group, was badly damaged. But as we can conclude from the remains, a connection with the grave-goods, as observed in the first group, is missing here. Nevertheless, the analysis of bone remains revealed that the deceased in grave 3 was also a child aged between 4–6 years, whereas the only sign, which could give us an indication about the deceased in grave 4 is a spindle-whorl. The individual in the single grave 5 was osteologically determined as a young individual aged 15–17 or a woman of 15–30 years, although a double burial could also have been possible.¹⁴ However, graves in a settlement are a novelty in the region and present a phenomenon in this period which will have to be investigated further.

4. The Late Urnfield period

All the remaining Urnfield period cemeteries in the region, from where the osteologically studied cremation samples also come, are dated to its later stage, i.e. Ha B, with just their modest beginnings in the late Ha A.¹⁵

As a basis for the presentation of our work, we shall briefly pass over the hitherto known results about the burial rite study of the Late Urnfield period in eastern Slovenia. In any case we can say that, following some general rules, it was more or less recognizable in the archaeological record.

As already often explicitly stated, in the studied region the deceased were also cremated in their dresses, wearing the majority of their jewellery/attire.¹⁶ Besides that, some of the pots were also placed near or onto the fire, since they undoubtedly bear signs of secondary fire exposure.¹⁷ As we can conclude from the presence of charred animal bones, meat also found its place on the pyre.

The majority of the research on the Urnfield period cemeteries in the region has been dedicated to their dating and their installation in a broader cultural context.¹⁸ However, the study of the social relations was also not neglected. The most recent attempt was first introduced 25 years ago and it divided the graves/individuals into a tripartite division between graves with metal objects,

graves with pottery and graves without any grave goods. Furthermore, the graves with gender characteristic finds, jewellery and tools, were the basis for a social classification of the communities studied, in which the individuals were divided into 5 groups, one male and four female. As shown on the basis of the comparison of the three largest cemeteries Ruše I, Pobrežje and Dobova,¹⁹ the tendency for the social structure was quite similar, although regional differences occurred.²⁰ However, if we observe the relations between the different cemeteries of the Ruše group, we come across major differences (Fig. 2). It is interesting that the smaller cemeteries, on the one hand, tend towards a lower presence of metal finds, as in the cases of Rabelčja vas and Ruše II – which is the neighbouring cemetery of Ruše I and apparently belongs to the same settlement lying in-between – and, on the other hand, express an almost incomparable wealth, as witnessed in Miklavž and Ormož.²¹

Besides, it has to be mentioned that Ruše I and II, Pobrežje and Rabelčja vas are dated to a broader period within Ha B, while Miklavž, Ptuj and Ormož belong to its end and mark the transition from the Urnfield period to the Early Iron Age.²² However, because Ruše – and according to the most recent analysis, also Pobrežje – were in use till the end of Ha B, the comparison is more than relevant and it is interesting to observe the difference and similarities between them. Not going into detail, and marking only the most striking differences, we shall firstly mention the regular occurrence of iron, which initially was used only for female neck rings, arm rings (Ormož, Miklavž),²³ but also for male weaponry (Ptuj), which was, however, still predominantly made of bronze (Ptuj, Ormož and Zavrč). The appearance of male weaponry in graves is the second profound change to the ritual, as weapons were a respected

14. The analysis of the bones from Podsmreka was carried out by P. Leben and is known by date only from MURGELJ 2008, 163–166.

15. Not included is due to the publication after the finishing of the submitted version of this article the cemetery of Gorice near Turnišče (PLESTENJAK 2010).

16. TERŽAN 1995, 340 ss. As an exception to the rule, on several occasions some of the pieces of jewellery were excluded from the cremation.

17. ČREŠNAR 2006, 147–148. – Also observed by H. HENNIG 1993, 24.

18. MÜLLER-KARPE 1959. – PAHIČ 1957. – PAHIČ 1972.

19. All the cemeteries consist of more than 170 graves.

20. TERŽAN 1985. – TERŽAN 1987. – TERŽAN 1995, Abb. 11–15. – TERŽAN 1999, Fig. 9–13.

21. Two graves of a similar type were found in Ptuj (Viktorina Ptujjskega Street) (LUBŠINA-TUŠEK 2001b, 292–298).

22. At this point, the radiocarbon date of the cremated bone from Miklavž grave 5 should be mentioned. It is referred to in the article on several occasions (fig. 6). The result of the analysis KIA39671 is 2735 ± 25 BP, which means 901–841 cal BC (68.2%, 1σ) and 928–816 (95.4%, 2σ). But, as mentioned earlier, the dates received have not yet been properly studied and some crucial samples are still in analysis, so no real conclusions can be drawn.

23. There are also some graves from Ruše I (graves 21, 31, 70) which contain iron (cf. TERŽAN 1990), but its occurrence is not so frequent as in the cemeteries mentioned.

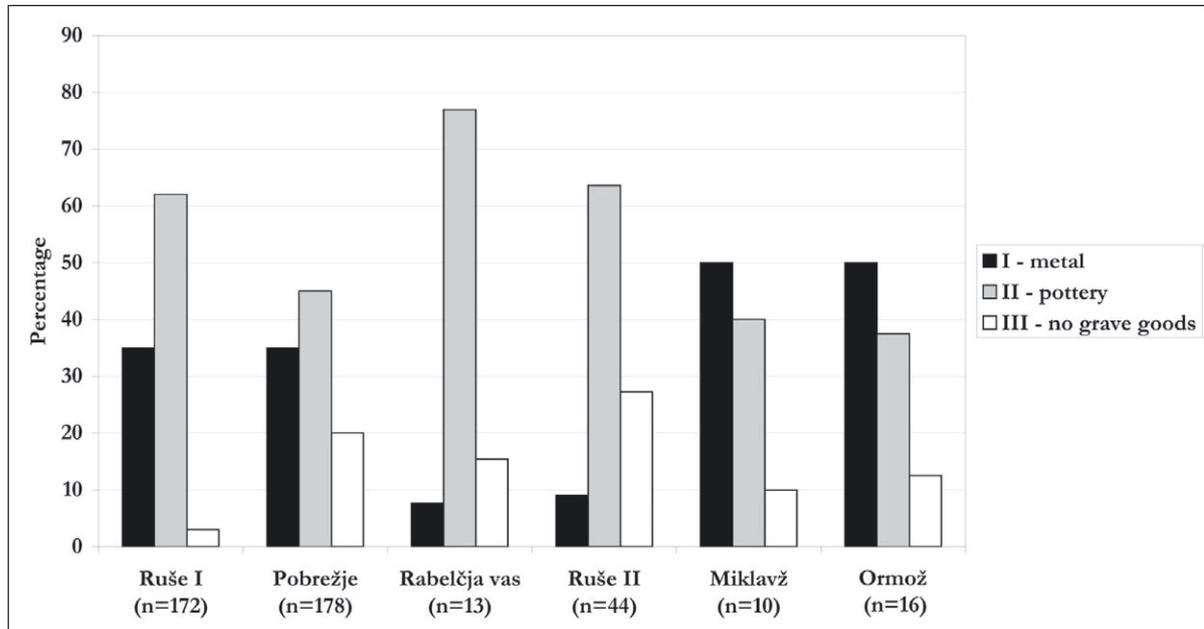


Fig. 2. Comparison between the cemeteries of the Ruše group of the late Urnfield period in terms of the composition of grave goods.

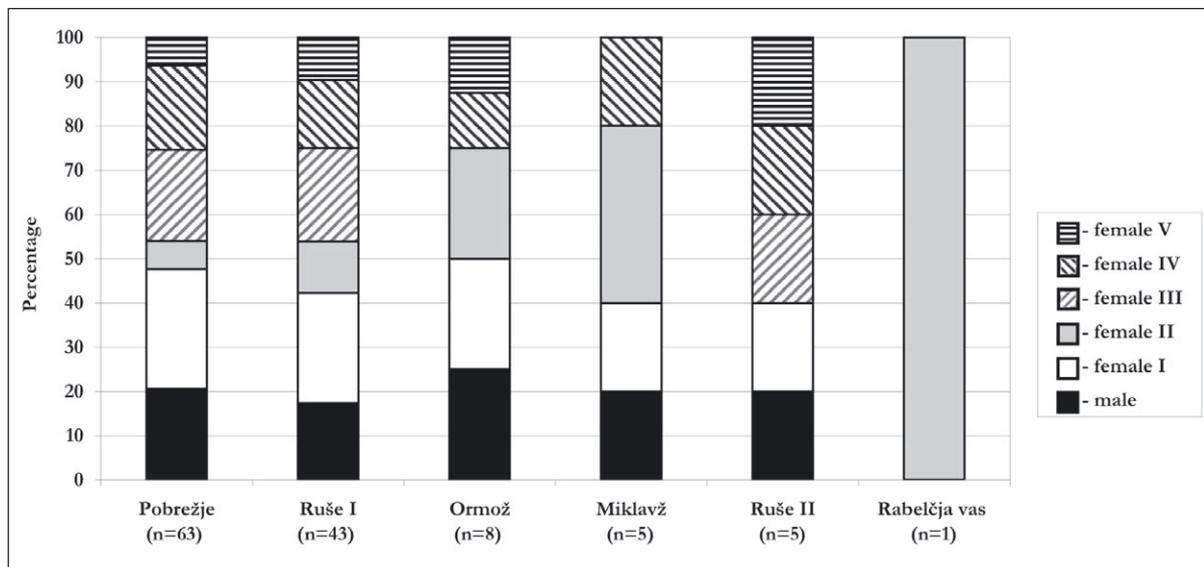


Fig. 3. Comparison between the cemeteries of the Ruše group of the late Urnfield period in terms of the division based on attire groups.

taboo during the previous periods of the UFC in this region.²⁴

With the intention of gaining a deeper insight into the structure of at least one segment of the society, we have slightly remodelled the division of the graves with sexually determinative grave goods from Pobrežje, which we already knew about.²⁵ Without going into detail at this point our division was made as follows: Men, who form one group, are characterized mainly by pins. By contrast we can divide women into five groups with different marking elements of attire: female I – neckring, female II – bracelet, female III – fibula, female IV – ring (massive ring, wire ring, spiral ring, sheet ring) and female V – spindle whorl, needle. After completing the division, it is interesting to observe a quite proportionally ordered social structure in the majority of cemeteries, where on the other hand we observed profound structural differences (Fig. 3).

The “furnishing” of the graves, focusing more on pottery, was examined at the cemetery of Ruše II, where the vast majority of the graves did not contain any metal objects,²⁶ and at the cemetery of Miklavž na Dravskem polju, which was excavated with the most recent techniques used for archaeological excavation.

In the cemetery of Ruše II there were 44 graves with altogether only four fragments of bronze jewellery and a piece of slag²⁷ while 12 graves were without grave goods (Fig. 4). But as our analyses have shown, some of them also held information about their arrangement as they were covered with stones and/or contained fragments

of pottery, the latter probably being the remains of the ritual breaking of the pots, comparable for instance with Niederkaina (Saxony, Germany).²⁸ In this connection, two fragments of the same vessel, which were found in different graves, should be mentioned. Although the upper parts of the graves were destroyed and the cuts barely visible, we can link that to the similar situation observed in St. Andrä (Lower Austria), where pieces of the same pots were found in different graves. Following the hypothesis of C. Eibner, the pot was broken at the death of a chosen member of the family and a part of it also found its way into this person’s grave, whereas the other part later accompanied some other member of that family in his grave.²⁹

Besides the “empty” graves, we distinguished between the graves with urns and the graves without them. The combination of vessels adjacently placed into the grave consisted most frequently of a taller vessel, such as a jug or amphora, and a shorter vessel, such as a dish. Interestingly, the pottery assemblages occurring in graves with or without urns were, to some extent exclusive, while some combinations occurred in both types of graves. Additionally, we have questioned the relations between the vessels/their assemblages and the existence of other parameters observed, i.e. the covering of the graves/vessels, pottery fragments, etc. Summing up, it became obvious that their characteristics seem to be connected and probably appear with defined types of pottery, i.e. pots, pairs of dishes and jugs, the latter almost completely excluding each other with amphorae, whereas graves with amphorae and one dish rarely include those remains of the ritual.

A (pre)treatment of some vessels in the graves is also worth mentioning. It was documented that their necks were cut off,³⁰ as for instance with some pots and amphorae from Ruše II, Pobrežje, Miklavž and Rabelčja vas.³¹ Holes in vessels, which could have been made when the pot was formed, or could have been cut into the pots after burning, were also observed. The first appear on the upper parts of the vessels and, above all, are characteristic for the Dobova/Velika

24. TOMANIČ-JEVREMOV 1989, Tabla 8/4; Tabla 13/1–3; Tabla 18/4 and Tabla 19/1. – LUBŠINA-TUŠEK 2001b, Tabla 1. – Zavřč (unpublished) pers. com. with the excavator M. Lubšina Tušek. (The situation which we can observe there is alien to everything we knew till now. The partly excavated cemetery consists of 57 graves and, as it appears, it has several phases. One dated to the very beginning of the Urnfield period, which is contemporary with the graves from Ptuj (Potrčeva ulica), and the others which have clear Ha B analogies. Furthermore, the arrangement of the grave itself is unique. Its specific feature is the elevated earthen centre of the grave, where in many cases the grave goods, pottery or metal material, were deposited. The charcoal and the burned human remains were deposited in the trench surrounding the “island”. In some cases charred parts of attire remained in the charcoal-bone layer, instead of being placed onto the central part.

25. TERŽAN 1999, Fig. 10–13.

26. ČREŠNAR 2006, 147–152.

27. The piece of slag is still unpublished, as it was found amongst the cremated bone remains after the publication of the 1993 excavation campaign results (ČREŠNAR 2006).

28. COBLENZ, NEBELSICK 1994, 19 ss.

29. EIBNER 1974, 86.

30. Similar (pre)treatment of vessels was also observed in Niederkaina (HEYD 2002, 15 ss.).

31. These are the graves 1, 5, 8, 13, 24 from Ruše II (PAHIČ 1957), graves 41, 111 and 137 from Pobrežje (PAHIČ 1972, Tabla 10/4; Tabla 22/4 and Tabla 26/9), grave 2 from Rabelčja vas (STRMČNIK-GULIČ 1980, Tabla 1/2) and grave 9 from Miklavž (unpublished). The vessel from Miklavž has additionally a hole made into its bottom.

Grave	Urn	Jug	Amphora	Dish	Bowl	Pot	Metal	Pottery fragments	Coverage	
									Stone	Pottery
9										
15										
35										
2/1993										
3/1993										
4/1993										
7/1993								x	x	
20								x	x	
23								x	x	
25								x		
30								x	x	
31								x		
27	Bowl									
17	Amphora									
26	Amphora									
1/1993	Amphora							x		
28	Pot							x		
34	Pot							x	x	
9/1993	Pot							x	x	x
32	Pot							x		x
3		x					fibula	x	x	
12		x							x	
V		x						x		
8/1993		x		2x					x	
8		x	x		2x					
4				x						
6				x						
10				x						
21		x		x						
18	Amphora	x		x						
1			x	x						
2			x	x						
24	Pot		x	x						
16	Pot		x							
33	Jug		x		x				x	
22	Pot	x	x	x				x		
6/1993	Pot			2x		x	pin	x		

Fig. 4. Division of individual graves from Ruše II according to grave goods and the remains of burial rituals.

Gorica group of the Urnfield period, whereas the latter also occur on the bottoms of vessels.³²

As some would be seeking for verification of these results at other cemeteries, it has to be said that the same patterns are

32. A hole made into the vessel from grave 9 from Miklavž was already mentioned in the previous footnote. There are also holes documented on one of the jugs from grave 5 from Miklavž (Fig. 7), on the pot from grave 34 from Ruše II (PAHIČ 1957, Tabla 12/2), on the pot from Pobrežje grave 87 (PAHIČ 1972, Tabla 18/9). For Dobova and Velika Gorica see STARE 1975, for example Tabla 58/4, 6, 8 and KARAVANIČ 2009, Plate 64/1, 3.

not expected everywhere, although comparative research is being carried out. However, if we observe the cemeteries published, some of the profound differences instantly appear. In Ormož and Rabelčja vas, for instance, the graves were covered neither with stone slabs nor with larger pebble stones. On the other hand, in Pobrežje, many of the graves were also covered with a small mound of pebble stones, which was also just partly observed in Ruše II and Miklavž. Also the larger urns, which often hold all the grave goods, are interestingly not an ubiquitously present phenomenon, since they do not appear in Ruše II and Rabelčja vas, but on the other hand they do mark the cemetery of Pobrežje.

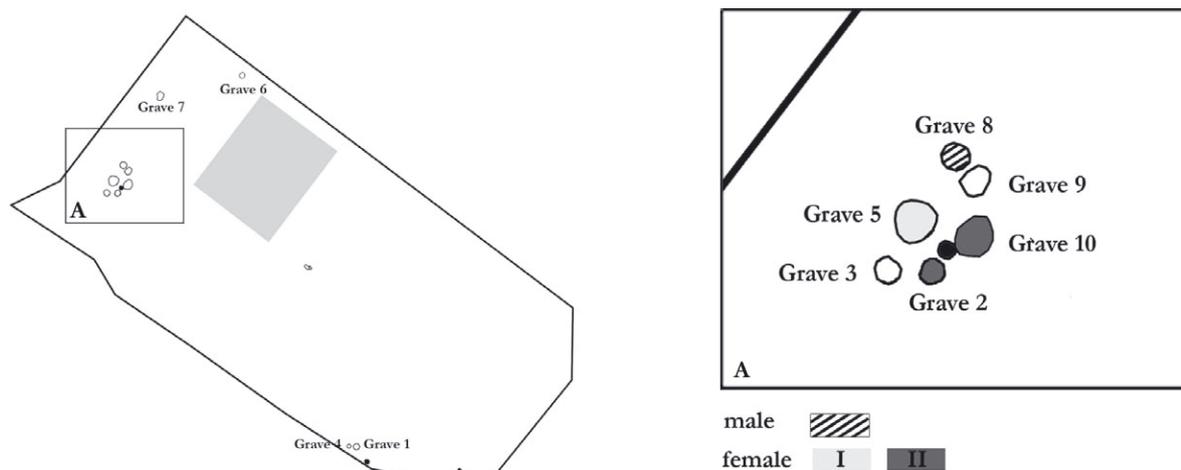


Fig. 5. Plan of the cemetery of Miklavž na Dravskem polju (drawing by: PJP d.o.o.).

The newly excavated cemetery at Miklavž is interesting as it comprises a small number of graves (Fig. 5), which however – like the graves from Ormož (Fig. 6) – demonstrate unity. But before we analyse the structure of the cemeteries we shall firstly describe the composition of grave 5 as was observed during the excavation (Fig. 7A–B). The first vessel put into the grave-pit was the biconical vessel used as an urn, which was firstly filled with the remains of the cremation pyre mixed with bones and the majority of the jewellery. On top of this layer an unburned iron necklace wrapped in textile was placed.³³ The second filling was earth, on top of which there were two small vessels; one of them, a jug (Fig. 7C: 10), decorated with tin, also had a hole in its lower body part. The lower part of the grave pit was first filled with approx. 0.20m of soil, onto which a knife on the NW and a bowl on the NE side of the urn were placed (Fig. 7A, 7C: 14). Repeated filling with soil was followed by the arrangement of 9 vessels, partly in two layers (Fig. 7B, 7C: 11–13, 15–16, 20–23). After some more soil was filled into at least the western part of the grave, a cup and a bowl, put one into another (Fig. 7B, 7C: 18–19), were placed just above the rim of the urn. Then the grave was covered with earth and pebble stones – a natural component of the geological ground.

Although striking new data has been documented in Miklavž, it is only grave 5 which was preserved to such an

extent, that it offered a detailed insight into the arrangement of a grave.³⁴

Another matter repeatedly studied in Urnfield period cemetery research is the organization of the cemeteries.³⁵ No general key, however, has been recognized for the transcription of the plans used. The recently excavated graves at Miklavž have given us, along with the cemetery of Ormož, a chance to research the inner structure of a smaller community.

We shall firstly examine Miklavž, where the central part of the cemetery is marked by six graves, five of them being arranged in a semi-circle around grave 5 (Fig. 5). Interestingly the group, with most probably one male individual (grave 8),³⁶ contains mostly graves of women with different attire; they consecutively belong to different attire groups: A woman with a necklace (grave 5) and two women with a bracelet (grave 2 and grave 10).³⁷

A very similar situation can be observed at the cemetery in Ormož (Fig. 6), which is located just outside Ormož, a Late Bronze/Early Iron Age proto-urban settlement of central character.³⁸ Following the same division as previously,

33. A similar observation was made for the neck ring from Ormož and probably also the assemblage of male armoury from Ptuj (Viktorina Ptujškega Street).

34. The excavation was a rescue mission of a previously unknown cemetery which was found during ongoing construction works and it was executed by PJP d.o.o.

35. MÜLLER-KARPE 1959, 116. – TERŽAN 1990, 22. – PAHIČ 1991, 115 ss. – ČREŠNAR 2006, 152.

36. As the bronze fragment found in the grave could also be interpreted as a part of a needle or a fibula, the interpretation of this grave is not without doubt.

37. From the other graves, only grave 6 included pieces of attire, i.e. wire rings (female IV).

38. TOMANIČ-JEVREMOV 1989. – DULAR 2010.

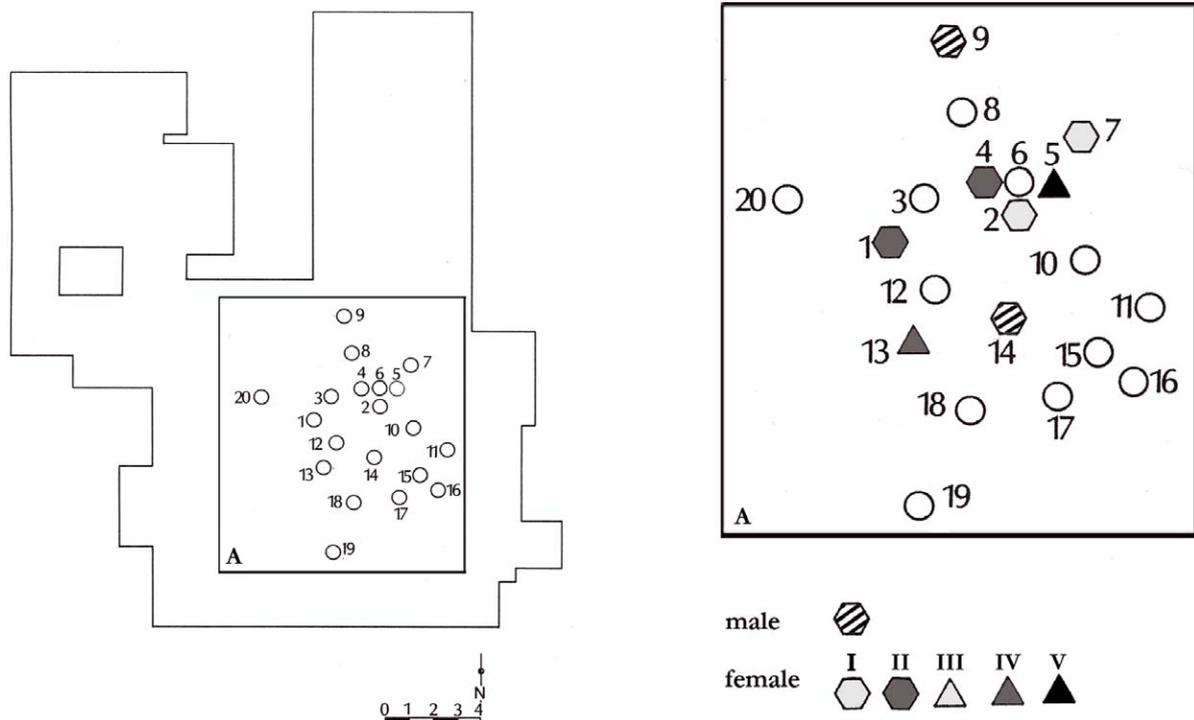


Fig. 6. Plan of the cemetery of Ormož (after TOMANIČ-JEVREMOV 1989, t. 1).

we encounter members belonging to different attire groups, yet the proportional relations between them are similar. Interestingly, the proportions seem to be roughly comparable, even if we observe the graves with significant finds on the level of the whole Ruše group (Fig. 3). That is more than an indication that the social differentiation followed a rule, the outline of which was traced by our grouping. Observing the cemeteries of Miklavž and Ormož it seems that the groups buried there were bonded by a close relationship. This is not only shown by the proximity of the graves but also by the similarity of grave goods, their form and unique ornamentation (Fig. 8). Can we assume that these graves represent family cemeteries, where the relationships and status of individual family members are mirrored by the grave goods found in their graves? Can we further presume that, according to the similar proportions between the individuals with different attire groups, this was a frequent family structure?

If, without accomplishing a complex analysis, we take a look at Pobrežje – one of the cemeteries which were in use for over two centuries – we can observe that the members of different attire groups are set out throughout the cemetery (Fig. 9). If, furthermore, we observe the NW part of the cemetery, where most of the graves with attire are located, we can find evidence for a considerable chronological division, which we could not follow at Miklavž and Ormož.

Taking a look at the male graves 36, with a club-headed pin, and grave 43, with a small vase-headed pin,³⁹ as well as all the female graves of this group, some with spectacle fibulae with a coiled figure-of-eight and others with bracelets with ornaments consisting of sheaves of incised lines,⁴⁰ we have to speak about several generations of individuals, which might – if we follow our interpretations gained at Miklavž and Ormož – have belonged to one family.⁴¹

5. Application of the information gained from osteological analysis

5.1 Human bone material

The cremation features documented make it clear that the deceased from Ruše II and Pobrežje were left on the

39. PAHČ 1972, Tabla 8/17–18 and Tabla 10/5–9.

40. PAHČ 1972, Tabla 6/5–17; Tabla 7/12–17; Tabla 8/5–13 and Tabla 9/1–10.

41. However, since the cemetery was in use for such a long time it is, on the one hand, not easy to separate the groups from each other since there are no visible traces of any space division, i.e. grave parcels; on the other hand the forms of vessels used at the burial also changed to some extent with time. That makes it a much more demanding job to trace the similarities on the basis of pottery, as we tried on the examples of Miklavž and Ormož.

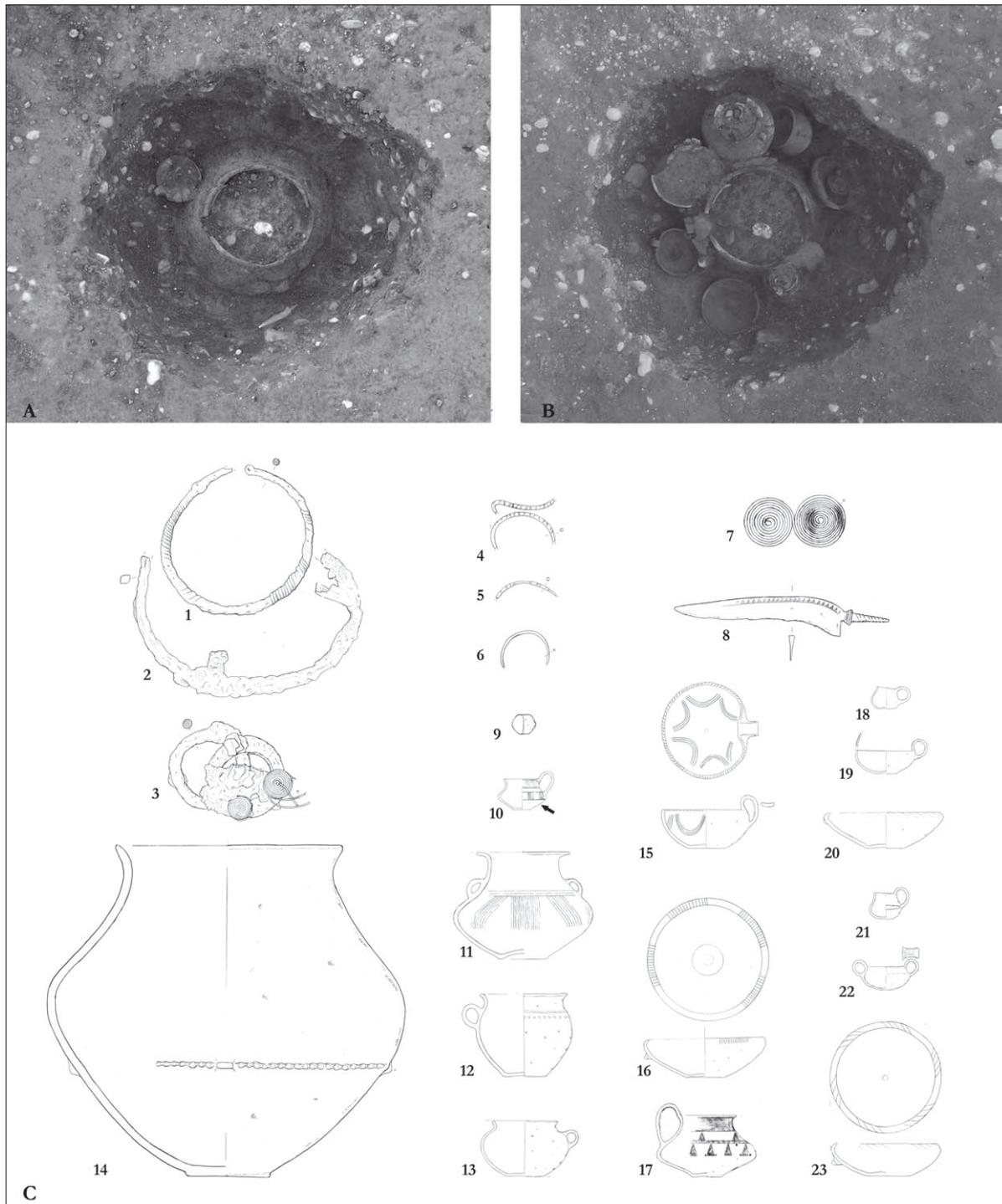


Fig. 7. Grave 5 from Miklavž na Dravskem polju: A, B – phases of its excavation, C – a selection of finds. Scale: 1:6 (1–9), 1:12 (10–23).

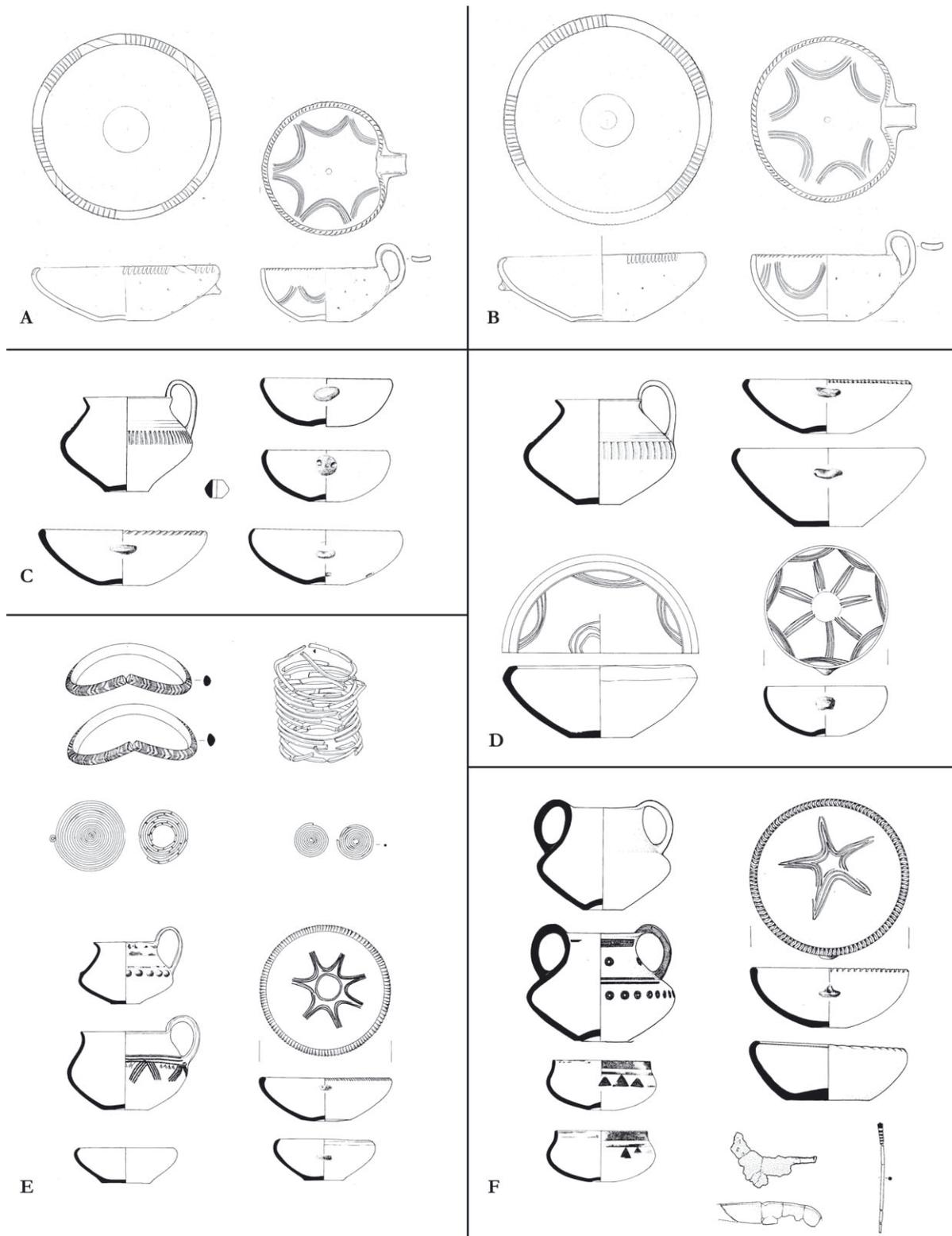


Fig. 8. Selections of the grave goods from Miklavž: A – grave 2, B – grave 5. Ormož: C – grave 5, D – grave 10, E – grave 1, F – grave 14 (after TOMANIČ-JEVREMOV 1989, t. 6–7, 11, 19–21, 22–24).

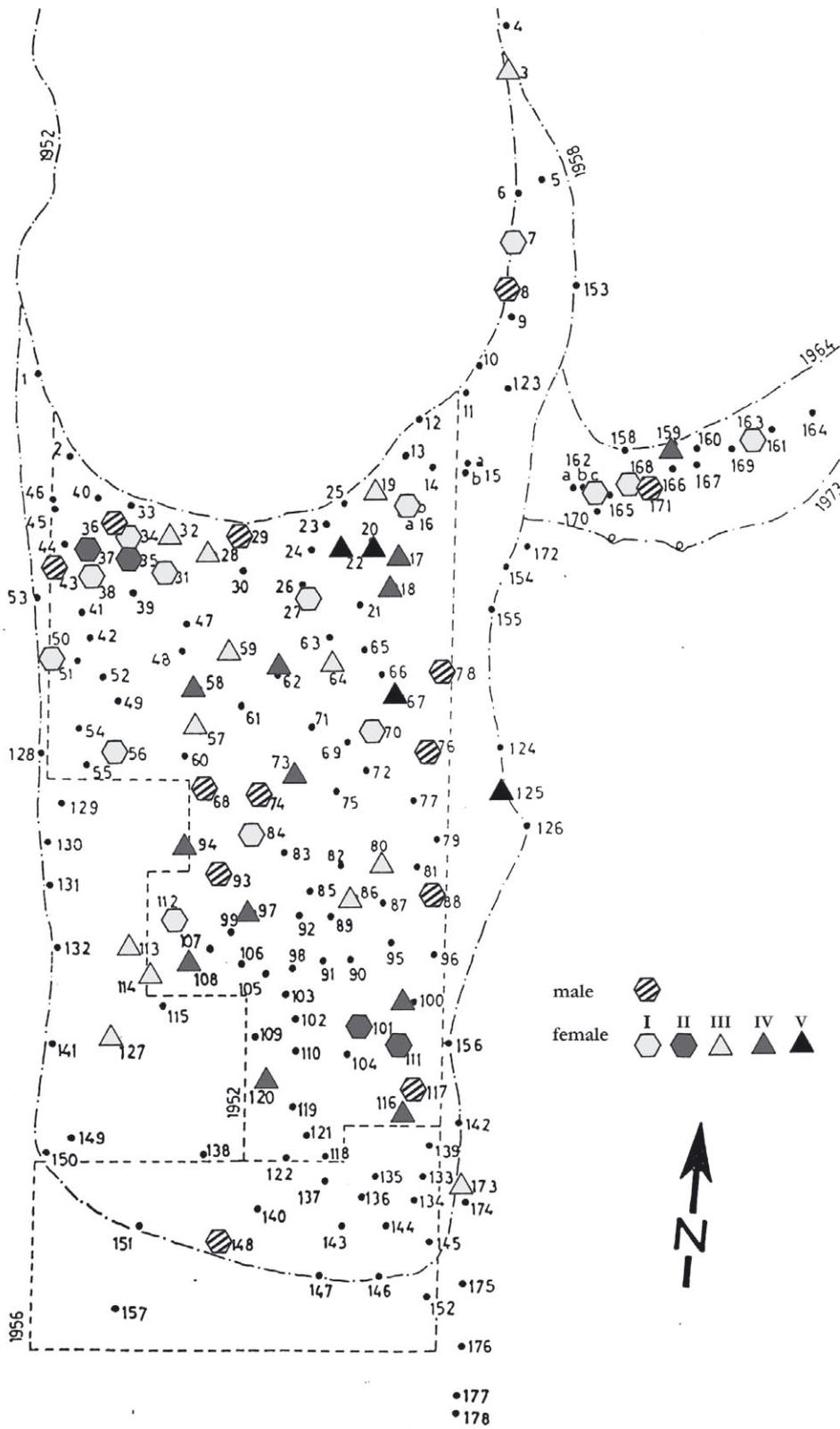


Fig. 9. The cemetery of Pobrezje with the mapped members of individual attire groups (after PAHČ, S. 1991, 18).

pyre for short periods of time at low temperatures (200°C–300°C) as testified by the light colouring of the bones. The bones from Miklavž show very similar features, but with various areas indicating the influence of temperatures reaching above 300°C and up to and over 645°C. Although the majority of the bones are predominantly tan or brown, even indicating burning at a constant temperature, the variation in colour of several of the cremated remains may indicate partially uneven burning of the individuals. On the other hand, the deceased from Gračič near Brinjeva gora were generally left on the pyre for a longer period of time at higher temperatures (over 500°C), as is shown by the blackened coloration and higher degree of burning.

Another interesting aspect when dealing with burned bone remains is their amount. In perfect conditions a human body burns up to an amount of 1000 to 2400 g of bone remains,⁴² of which only a small percentage was generally put into the graves of the researched cemeteries. The average amount of bones per cremation is approximately 102 g, ranging from 122 g per cremation (132 g per grave) at Pobrežje to 55 g per cremation (72 g per grave) at Ruše II.⁴³ Moreover, an interesting situation occurs at Miklavž, where the average amount of 175 g per cremation is lowered to 50 g, if we exclude the outstanding grave 5, which contained 1049.6 g of bone remains. The number is even more impressive if we note that the next largest bone collection was found in grave 135 from Pobrežje and weighed 573.7 g.

As grave 5 from Miklavž is one of the richest female graves in the region (Fig. 7), we have assumed that the wealth of the grave goods, i.e. status of the deceased,⁴⁴ corresponds to the amount of bone remains gathered, which would also mean a greater effort and consequently a higher degree of respect for the deceased. But in our analysis on the samples from Pobrežje no connection between the grave-goods related status and the amount of bones collected for the funeral could be recognized (Fig. 11). On the other hand the amount of bone remains was also compared with the

different grave organizations and other remains of ritual as proposed for the Ruše II cemetery.⁴⁵ Again no clear correlation could be established. This leads us to the preliminary conclusion that the amount of the bones put into the grave did not have a particular meaning for the ritual and that the amount of 1049.6 g at Miklavž's richest grave had the same meaning as the 39.4 g in grave 98, the richest female grave from Pobrežje, and the 60 g in grave 289, the richest grave from Dobova.⁴⁶

It was also noticed that large numbers of skull and long bone fragments were recovered from all the sites. However these are, on the one hand, the bones that survive the cremation better than other areas of the body,⁴⁷ on the other hand, we could also find remains of other bones in graves with more extensive bone collections.⁴⁸ Following the different assemblages of bones in the collections analysed we can assume that also the assemblage of the bones did not follow a strict rule regarding what to pick and what to leave at the location of the cremation.

However, the most valuable information sets, which gain their full significance when combined with other archaeological data, are the broader age estimation and the sex determination. The basis of our study was the revised subdivision of the population of Pobrežje, already presented, which was chosen because all the excavated material from the 178 excavated graves had already been published;⁴⁹ the basic archaeological studies on the population structure were also executed and in addition a representative number of 77 bone remains samples were available for osteological analysis.

The male part of the population was very equally equipped, with a pin, but in only two cases with other metal objects, a twisted bracelet and a chisel.⁵⁰ In addition we also encounter razors and some other artefacts in cemeteries as

42. MCKINLEY 1993, 284.

43. There are some major differences between the graves in Ruše II excavated in 1952, where the average amount is 32 g per cremation (44 g per grave) and the excavations of 1993, where the amount is 234 g per cremation/grave. That could be the difference between the excavation techniques which changed in that half of the century, or also between two parts of the cemetery, which on the contrary was not observed elsewhere. However, the three cemeteries of Pobrežje, Brinjeva gora and the first part of Ruše II cemetery were excavated by the same excavator, S. Pahič, so the data can be correlated.

44. Although the causal-consecutive relationship between the finds and the interpretation of the deceased in the grave is by no means that simple, we do use this simplified formula.

45. ČREŠNAR 2006, 147–152 and Abb. 38.

46. It might be that one of the changes introduced at the end of the late Urnfield period is also the changed ritual concerning the collection of the human remains. However, since so far access was gained only the cremated material from Miklavž, and from none of the others which are dated to this period, this can be only an idea, which will have to be reconsidered in the future.

47. THOMAS 2009, 58.

48. For example: grave 5 from Miklavž included a skull, long bone, ribs, scapula, pelvis, vertebrae, hands/feet, whereas grave 6 from Miklavž included, in addition, a piece of sternum, etc. Furthermore, we have to add the approximately 40 % of bones which are, on average, not identifiable.

49. PAHIČ 1972. – PAHIČ 1991.

50. PAHIČ 1972, t.7/11, t. 18/10.

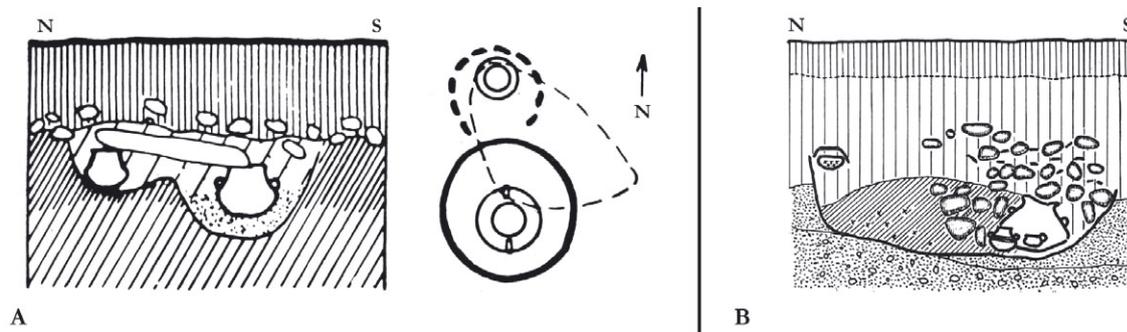


Fig. 10. Double graves with a male individual and an infant: A – Ruše II, grave 11, B – Pobrežje, grave 76.

for instance Ruše I and Brinjeva gora, but the picture of a relative unity of the male part of the society remains.⁵¹

At least the anthropological analysis gave information about the age of the deceased from 6 of the 13 graves from Pobrežje, which, due to the presence of a pin, we determined as male. However, prior to gaining a deeper insight into the results, mention has to be made of grave 36 from Pobrežje, the grave with the oldest pin of the cemetery, a club-headed pin. The deceased was identified as an adult male, which once again supports one of the basic conclusions used for the sexual division of individuals. Four others from the male attire group were identified as adults, while one may have been an infant. But the situation in grave 76 with the infant is far from clear. The relatively large grave was on the floor, partly filled with a layer of charcoal and some bone fragments. It also contained the bronze pin. On the south side there were three vessels, two amphorae and a cup within a larger one. They were covered with 0.25m of pebbles and pottery shards. The tiny bones, as already recognized by the excavator in the initial publication, were kept separately in a dish on the north side of the grave (Fig. 10B).⁵² On the basis of these facts we can ask: Was that a grave of a male infant, or was that a double grave of a male individual and an infant? A similar situation was observed in grave 117 at Pobrežje and its immediate neighbour, grave 117a. There was a pin retrieved from grave 117, whereas grave 117a held only one vessel, an amphora, which bore the remains of an infant.⁵³ A similar situation was also documented in grave 11 (Fig. 10A) at the cemetery of Ruše II. The grave is, as in the case of Pobrežje 76, oriented N-S, and in the north part we repeatedly came across a small urn with bone remains of an infant. In this case in the southern part there was another

urn, but sadly the bones revealed no detailed information.⁵⁴ Additionally, it also has to be mentioned that the bone remains from graves with male attire at Dobova in the lower Slovenian Sava valley, were always – provided determination was possible – identified as adults.

Following the results of this research we can make the ascertainment that the pin in the groups researched was only worn by adult males and was therefore probably a *signum* for having reached and crossed a threshold in their life. What the age or occasion was when they became, as is our guess, “fully integrated members of the male society” is not clear; the only additional piece of information we have is that the “youngest” individual with a pin has a minimum age of 20 years.⁵⁵

As already stated, based on different compositions of the jewellery or attire, the female population could be further subdivided (Fig. 11). Furthermore, our division of the female society was combined with the results of the osteological analysis.

As with the male part of the society, there was only one sexually determined individual. This is grave 27, where a woman with a necklace was buried. It could also be established that she was aged between 21 and 30 years when she died. Other parts of her attire were two bracelets, a pin and two spindle-whorls. The women with a necklace as the designating element, who were – if we conclude not only from the other accompanying metal goods but also from the pottery – the wealthiest females, are not like the men with pins – who were adults only. At Pobrežje one of them was

51. PAHIĆ 1989, Tabla 1/2, 8. – MÜLLER-KARPE 1959, Tafel 109/K2; Tafel 113/D2.

52. PAHIĆ 1972, 52, 90 and Tabla 15/10–15.

53. PAHIĆ 1972, 66–67, 93 and Tabla 23/4, 8–9.

54. PAHIĆ 1957, Priloga 8 and Tabla 5/1–2. However, for all the mentioned graves it is almost impossible to say whether it was a double grave made with two individuals being buried at the same time, or whether it was a subsequent burial of an infant next to an already buried male individual.

55. This is just the minimum age, which means that he could have been older.

Grave	Urn	Other pottery	Spindle-whorl	Needle	Knife	Button	Saltaleone	Fibula	Sheet ring	Massive ring	Wire ring	Spiral ring (big)	Spiral ring (small)	Bracelet	Necklace	Pendant	Others	Anthropological analysis	Weight of bone remains (g)
162c	x	1										1	1		2				
98	x	3	1	1				2	1					4	1	2		Adult	39,4
7	x	6	1		1		1	2						2	1		13 clay rings		
49	x	2						2						2	1				
31	x	7		1										4	1				
50	x	4												2	1				
38	x	6	1											2	1				
27	x	4	2	1										2	1		Small stone, animal bone	Adult female, 21-30 years	130,7
112	x	3							1		2		1	2	1		Pincers (?)		156,1
16b	x	3	1			3									1			Adult	
70	x										1				1		Animal bone	Infant	35,3
84	x							1		1		1?			1		Animal bone	16+ years	248,6
56	x							1							1		Animal bone	Adult	37
34	x	5													1				
168	x	4													1				
163	x	2													1				
99		2													1				
35	x	2		1				1		2				2					
111	x		1						1					1				13+ years	91,9
37	x	1												1					
101	x													1			Red deer		232,7
32	x	1						2		1		1						14+ years	144,6
86	x	2	1					2		1		1					Animal bone	20+ years	228,9
113	x							1				1					Sheet tube	16+ years	148,5
173	x							1				1							112,5
19	x							1					1						146,1
3		2			1			1						2				Adult	32,3
57	x	3	1					1						1			Red deer, pig	Adult	302,3
64	x	2	1					1						1					
114a	x	3	1					1				1?							
127	x					2		1								4			
28	(x)							1											
59	x	3						1										15+ years	95,9
80	x			1				1											20
17	x	5								1									
94	x										1(?)							Adult	467
116	x	3	1								1						Animal bone		15,7
159	x	2										1							
18	x	2											1						
97	x	3											1					Adult	41,9
100	x	3											1						13
108	x	1											1					Adult	76,6
120		1											1					Adult?	13,7
62	x	3	2	1(?)									1(?)						
73	x			1		1			1								Animal bone	14+ years	152,1
58				1					1										
67	x	4	1	1															
22	x	3	1														Bronze sheet		
20	x	1	1																
125	x			1															

Fig. 11. Female attire groups I-V at Pobrežje.

a woman of at least 16 years of age, and one was an infant. The latter was buried in grave 70, which contained only an amphora used as an urn, holding all the bone remains with all the parts of the attire. Furthermore, it was covered by a stone plate, which emphasizes its credibility as a closed context. Besides that an infant member of this attire group was also identified in grave 305 at Dobova.⁵⁶ Also adding the data from Miklavž, the woman from grave 5, with two iron necklaces, was between 15 and 18 years old, whereas the woman from grave 29 from Ruše II was an adult. The bone remains of women wearing bracelets revealed data for our research in three cases. Grave 111 from Pobrežje belonged to a female of at least 13 years of age, whereas grave 2 from Miklavž belonged to an individual between 14 and 21 years, and grave 10 from Miklavž to someone younger than 23 years. Additionally grave 10 included the remains of a perinatal infant. A possibly daring interpretation would be that of a mother with a child, both dying during childbirth, but for confirmation of such a hypothesis DNA tests would be necessary. The women with bracelets are statistically younger than the women with necklaces. As many of the women with necklaces also possessed bracelets, the latter is maybe a sign of a lower social status (age), which could be upgraded by reaching a milestone in their life. It is, by contrast, interesting that all the non adults possessing necklaces at Pobrežje never had bracelets. If we consider once again the two infants with necklaces, one at Pobrežje and one at Dobova, we can postulate an assumption that the status of a necklace holder could have been reached in two ways, by inheritance or by a gradual rise in the society. Fibulae were worn by women of different ages, with the youngest holder being 14 years old. But the most interesting elements concerning age in the female population are the spiral rings. The big (wide) ones, ranging between 3.1 and 4.5 cm in diameter, which commonly appear together with fibulae, were never found with undoubtedly adult women. By contrast the small (narrow) ones, ranging from 1.3 to 2.4 cm in diameter, were only possessed by adult women. It is quite interesting that these women were mostly buried with no other metal grave goods. It is very tempting to interpret the big and the small spiral rings as hair-rings and explain them as expedient for different hairstyles. And if we reach back into our not so distant past we can find very convenient descriptions about appropriate hairstyles for younger and elder women or married and unmarried women, which were in a

56. TERŽAN 1999, Fig. 11. However, all the other women with necklaces from Dobova, where the age could be determined, seem to be adults.

way codified.⁵⁷ But the difference expressed here could also mean something completely different.

Given all the above information about the structure of the society, we shall return to our observation, that the rich part of the populations, the ones who had the status to be accompanied by metal objects into their graves, at the majority of cemeteries, with the exception of Rabelčja vas, show similar proportions of attire groups (Fig. 3). The number of males can be roughly paralleled with the number of women with necklaces, which makes up 40–50 % of the samples studied. Concluding from the study of the smaller cemeteries of Miklavž and Ormož, we cannot neglect the total concordance of those groups and therefore we shall once again bring to light the idea already expressed, in which the woman with a necklace was interpreted as a “married woman”, “first woman” or even “*mater familias*”.⁵⁸ For the other three groups of women it is easy to compare Pobrežje and Ruše I, which are in almost total accordance, whereas the other three all lack one or, in the case of Miklavž, two groups. A detail, which also caught our eye, is the appearance of bracelets, which corresponds with the general wealth of the cemetery (Fig. 2, 3). The question is, can we recognize the “second wife” whom a man could “afford” for himself, or the daughter, who wore adornments to the abilities of the family in this group of women?

Finally, if we examine the age of the individuals at Pobrežje we can see that the average age is very high. Amongst all of the 77 human osteological samples analysed there are four infants (5.2%), followed by one individual with the age of death being estimated at least 11 years, all others being older. Mention should also be made of the analysis at Dobova, where 60 individuals were analysed and 5 (8.3 %) of them were infants. That leads us to the question why that is so. That is just slightly above the level of the contemporary *mortality rate of under-5-year-olds* in European countries.⁵⁹

Where are the other children and juveniles (buried)? And what was special about those buried in the cemetery? One of them from grave 70 has female attire of the highest rank, i.e. with a necklace, and two are associated with men with pins, i.e. grave 76 and grave 117a. But there is also one,

57. JEDDING-GESTERLING, BRUTSCHER 1988, 30–33, 64 and 77–79.

58. TERŽAN 1999, 119.

59. The list of countries by infant mortality rate made by the United Nations Population Division (http://www.un.org/esa/population/publications/worldmortality/WMR2009_wallchart.pdf). By contrast, 47 of the 91 graves studied from the Early Medieval period in Slovenia belong to children (ŽORŽ 2007, 19).

Site	Grave	Animal	Bone description
Gračič/Brinjeva gora	34	Sheep/ goat (<i>Ovis s. Capra</i>)	Ribs
Gračič/Brinjeva gora	37	Cattle (<i>Bos taurus</i>)	Patella
Pobrežje	1	Pig (<i>Sus domestica</i>)	Maxilla
Pobrežje	57	Red deer (<i>Cervus elaphus</i>); Pig (<i>Sus domestica</i>)	Distal epiphysis of femur; mandible
Pobrežje	85	Pig (<i>Sus domestica</i>)	Occipital bone
Pobrežje	93	Wild boar (<i>Sus scrofa</i>)?	Tusks
Pobrežje	101	Red deer (<i>Cervus elaphus</i>)	Distal epiphysis of femur
Pobrežje	122	Sheep/ goat (<i>Ovis s. Capra</i>)	Left maxilla (molar region); atlas
Pobrežje	137	Marten (<i>Martes sp.</i>)	Mandibular ramus
Miklavž	5	Cattle (<i>Bos taurus</i>)	Skull

Fig. 12. Table of the animal bones found in graves of the cemeteries studied, which could be ascribed to certain animals.

buried in grave 138, which contains only an urn with some fragments of pottery as signs of the burial ritual.⁶⁰

5.2 Animal bone material

As already stated, 33 of all the osteologically analysed graves also included animal bones, which generally show the same cremation patterns as the human bones, which suggests that the bones were placed on the pyre together with the deceased. Ten of the assemblages contained remains, which could have been ascribed to a certain type of animal (Fig. 12). The majority belongs to domestic animals (pig, sheep/goat, cow), but there are also three graves containing the remains of wild animals (red deer, wild boar and stone/pine martin [*Martes foina/Martes martes*]), while one grave contained both.⁶¹

Whilst researching the presence of animal remains found in graves, we came to interesting results. Observing all of the graves with animal bones, i.e. 33, 14 were graves of women, two graves of men, two could have been double graves, whereas the rest can not be ascribed to anyone specific. At Pobrežje the females with animal bones belong to all the established attire groups and all the recorded age groups from infants to adults. The only male from Pobrežje, who was buried in grave 93 with animal remains,⁶² also holds a chisel besides a pin, the only such artefact found in graves at this very cemetery.⁶³ The only other male with animal re-

mains was documented in grave 53 from Brinjeva gora, who besides a pin also possessed one of the rare razors.

However, in two of the graves from Brinjeva gora some bone fragments were also unburned. And again the graves belonged to women with different attire. One possessed a fibula as the designating element and besides that two spiral rings, while the other one had a necklace, but also other pieces of attire. She was buried in a double grave with a male who was laid to rest with three pins and a razor.

6. Conclusion

Although the article presents intermediate results of an ongoing project, we can be quite satisfied with these first outcomes, which are shading new light on some aspects of cremation burials from North-Eastern Slovenia.

In our project we are trying to make use of a variety of modern scientific analyses, which can be also carried out on material excavated decades ago. With their incorporation in already known results, we are on the one side verifying results of former research and giving them an added value, deriving from scientific analyses.

The osteological studies of the bone material and the radiocarbon analysis of cremated bone samples are just two of the many possibilities of gaining new information in the wider scope of our research and other techniques and methods are more and more entering the field. Looking from this point of view a lot of information is still out there.

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60. PAHIČ 1972, Tabela 14/14–15; Tabela 15/10–15; Tabela 23/4, 8–9 and Tabela 26/5.

61. That is grave 57 from Pobrežje, which contains remains of a red deer and a pig.

62. The tusks probably belonging to a wild boar are depicted in the primal publication. They are described as different and belonging to two animals (PAHIČ 1972, Tabela 18/7). However, they were not amongst the finds from the grave so the information could not be reevaluated.

63. There was one found without a grave context (PAHIČ 1972, Tabela 40/7).

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Bibliography

COBLENZ, NEBELSICK 1997

W. COBLENZ and L. D. NEBELSICK, Das prähistorische Gräberfeld von Niederkaina bei Bautzen 1, Veröffentlichungen des Landesamtes für Archäologie mit Landesmuseum für Vorgeschichte 24, 1997.

ČREŠNAR 2006

M. ČREŠNAR, Novi žarni grobovi iz Ruš in pogrebni običaji v ruški žarnogrobišni skupini. Die neuen Urnengräber aus Ruše und das Bestattungsritual in der Ruše Gruppe der Urnenfelderkultur, AVes 57, 2006, 97–162.

DULAR 2010

J. DULAR, Ormož: utrjeno naselje iz pozne bronaste in starejše železne dobe. Ormož: befestigte Siedlung aus der späten Bronze- und der älteren Eisenzeit, Opera Instituti Archaeologici Sloveniae 18, 2010.

EIBNER 1974

C. EIBNER, Das späturnenfelderzeitliche Gräberfeld von St. Andrä v. d. Hgt. p. B. Tulln, NÖ, ArchA Beiheft 12, 1974.

GUŠTIN, TIEFENGRABER 2001

M. GUŠTIN, G. TIEFENGRABER, Prazgodovinske najdbe z avtocestnega odseka Murska Sobota – Nova Tabla / Vorgeschichtliche Funde aus dem Autobahnabschnitt bei Murska Sobota, AVes 52, 2001, 107–116.

HENNIG 1993

H. HENNIG, Urnenfelder aus dem Regensburger Raum, MatVgBayern Reihe A 65, 1993.

HEYD 2002

V. HEYD, Das prähistorische Gräberfeld von Niederkaina bei Bautzen 6, Veröffentlichungen des Landesamtes für Archäologie mit Landesmuseum für Vorgeschichte 33, 2002.

JEDDING-GESTERLING, BRUTSCHER 1988

M. JEDDING-GESTERLING, G. BRUTSCHER (eds.), Die Frisur. Eine Kulturgeschichte der Haarform von der Antike bis zur Gegenwart, München 1988.

JEVREMOV 1989

B. JEVREMOV, Grobovi z začetka kulture žarnih grobišč iz Ptuj. Gräber vom Anfang der Urnenfelderkultur aus Ptuj, AVes 39–40, 1989, 171–180.

KARAVANIĆ 2009

S. KARAVANIĆ, The Urnfield Culture in Continental Croatia, BARIntSer 2036, 2009.

LUBŠINA-TUŠEK 2001a

M. LUBŠINA-TUŠEK, Rogaška cesta. Ptuj – arheološko

najdišče Ptuj, desni breg. – Letno poročilo 2000. Zavod za varstvo kulturne dediščine Maribor, Maribor 2001, 264–267.

LUBŠINA-TUŠEK 2001b

M. LUBŠINA-TUŠEK, Občina Ptuj. Letno poročilo 1999. Zavod za varstvo kulturne dediščine Maribor, Maribor 2001, 254–299.

MCKINLEY 1993

J. I. MCKINLEY, Bone fragment size and weights of bone from modern British cremations and the implications for the interpretation of archaeological cremations, International Journal of Osteoarchaeology 3, 1993, 283–287.

MÜLLER-KARPE 1959

H. MÜLLER-KARPE, Beiträge zur Chronologie der Urnenfelderzeit nördlich und südlich der Alpen, RGF 22, 1959.

MURGEJ 2008

I. MURGEJ, Srednja bronasta doba na Dolenjskem – primer Podsmreka, Master's thesis at the Department of Archaeology, Faculty of Arts, University of Ljubljana, Ljubljana 2008.

PAHIČ 1957

S. PAHIČ, Drugo žarno grobišče v Rušah. Razprave 1, Razreda SAZU 4/3, 1957.

PAHIČ 1968

S. PAHIČ, 1968, Maribor v prazgodovini. Časopis za zgodovino in narodopisje n.v. 4, Maribor 1968, 9–63.

PAHIČ 1972

S. PAHIČ, Pobrežje, Katalogi in monografije 6, Ljubljana 1972.

PAHIČ 1991

S. PAHIČ, Moji poslednji pobleški grobovi. Doneski k pradedavnini Podravja 6, Maribor 1991.

PAHIČ 1989

V. PAHIČ, Žarno grobišče na Brinjevi gori. Das urnenfelderzeitliche Gräberfeld von Brinjeva gora, AVes 39–40, 1989, 181–215.

PLESTENJAK 2010

A. PLESTENJAK, Gorice pri Turnišču, Arheologija na avtocestah Slovenije 12, Ljubljana 2010. http://www.zvkds.si/media/images/publications/012_Gorice_pri_Turniscu_.pdf

PREŠEREN 2004

D. PREŠEREN (ed.), The Earth Beneath Your Feet. Archaeology on the Motorways in Slovenia. Guide to Sites, Ljubljana 2004.

STARE 1950

F. STARE, Ilirsko grobišče na Zgornji Hajdini pri Ptuj, AVes 1, 1950, 31–86.

STARE 1975

F. STARE, Dobova. Posavski muzej Brežice 2, Brežice 1975.

STRMČNIK-GULIČ 1980

M. STRMČNIK-GULIČ, Žarno grobišče iz Rabelčje vasi pri Ptujju, Situla 20–21, 1980, 61–70.

STRMČNIK-GULIČ 1989

M. STRMČNIK-GULIČ, Bronastodobni naselitveni kompleks v Rabelčji vasi na Ptujju. Der Bronzezeitliche Siedlungskomplex in Rabelčja vas auf Ptuj, AVes 39–40, 1989, 147–170.

TERŽAN 1985

B. TERŽAN, Ruška prazgodovina. In: J. TERŽAN (ed.), Ruška kronika, Ruše 1985, 27–42.

TERŽAN 1987

B. TERŽAN, Obredi in verovanja. In: N. TRAMPUŽ-OREL, B. TERŽAN, D. SVOLJŠAK (eds.), Bronasta doba na Slovenskem: 18.–8. st. pr.n.š, Ljubljana 1987.

TERŽAN 1990

B. TERŽAN, Starejša železna doba na Slovenskem Štajerskem. The Early Iron Age in Slovenian Styria, Katalogi in monografije 25, 1990.

TERŽAN 1995

B. TERŽAN, Stand und Aufgaben der Forschungen zur Urnenfelderzeit in Jugoslawien. In: M. ZU ERLACH (ed.), Beiträge zur Urnenfelderzeit nördlich und südlich der Alpen. Ergebnisse eines Kolloquiums, MonoRGZM 35, 1995, 323–372.

TERŽAN 1999

B. TERŽAN, An Outline of the Urnfield Culture Period in Slovenia. Oris obdobja kulture žarnih grobišč na Slovenskem, AVes 50, 1999, 97–143.

THOMAS 2009

J. L. THOMAS, Cremation studies: Developmental research within Slovenian osteoarchaeology. Proučevanje kremacij: razvoj raziskav v slovenski osteoarheologiji, Arheo 26, 2009, 53–61.

TIEFENGRABER 2001

G. TIEFENGRABER, Vorberichte über die Ausgrabungen 1999 und 2000 in Murska Sobota/Nova tabla. In: A. LIPPERT (ed.), Die Drau, Mur und Raab Region im 1. vorchristlichen Jahrtausend, Akten des internationalen und interdisziplinären Symposiums vom 26. bis 29. April 2000 in Bad Radkersburg, UnivFpA 78, 2001, 77–101.

TOMANIČ-JEVREMOV 1989

M. TOMANIČ-JEVREMOV, Žarno grobišče v Ormožu. AVes 39–40, 1989, 277–322.

WURMBRAND 1879

G. WURMBRAND, Das Urnenfeld von Maria-Rast, Archiv für Anthropologie 11, 1879, 232–440.

ŽORŽ 2007

A. ŽORŽ, Comparison of Slavic pots with gender and age of the deceased, Studia Mythologica Slavica X, 2007, 9–21.

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