

NS 7

# RECHERCHES ARCHÉOLOGIQUES



L'INSTITUT D'ARCHÉOLOGIE  
DE L'UNIVERSITÉ JAGELLONNE DE CRACOVIE

**RECHERCHES ARCHÉOLOGIQUES**  
**NOUVELLE SERIE**



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**RECHERCHES ARCHÉOLOGIQUES  
NOUVELLE SERIE 7**

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Joanna Zagórska-Telega<sup>1</sup>, Jacek Pikulski<sup>1</sup>, Anita Szczepanek<sup>2</sup>

## Excavations on a multicultural site 1 at Michałowice, Czarnocin commune, Świętokrzyskie province, season 2012

**Abstract:** Excavations on a multicultural archaeological site at Michałowice have been conducted since 2008. So far, a total area of nearly 3200 m<sup>2</sup> has been explored, bringing to light 107 archaeological features connected in the most part with the Przeworsk culture cemetery. In the 2012 season, 6 cremation burials and one groove-type feature attributed to this cultural unit were discovered. They were dug into a very large (ca. 30 m in diameter) natural closed depression.

**Keywords:** cemetery, Przeworsk culture, Roman Period, groove-type features, closed depression

### 1. Introduction

The excavation conducted in the 2012 season was the continuation of archaeological investigations which have been carried out on site 1 at Michałowice since 2008 (cf. Pikulski, Zagórska-Telega 2011; Zagórska-Telega *et al.* 2011; Zagórska-Telega *et al.* 2012) (Fig. 1)<sup>3</sup>. The area explored so far amounts to ca. 3200 m<sup>2</sup>, and has yielded 107 archaeological features, most of which are connected with the Przeworsk culture cemetery. In addition, burials linked with two Bronze Age cultures, namely the Trzciniec and Lusatian culture, were discovered, along with a number of features of an undetermined chronology (Fig. 2).

In the 2012 season, the fieldworks continued to concentrate in the north-eastern part of the site, where in 2010 a geomagnetic survey had been conducted by the team led by P. Wroniecki (Wroniecki 2012). The main goal of the research presented here was the verification of the mentioned geomagnetic survey. The exploration encompassed an area of approximately 600 m<sup>2</sup> and revealed the presence of a large circular structure ca. 30 m in diameter, designated as feature 100, with cremation burials attributed to the Przeworsk

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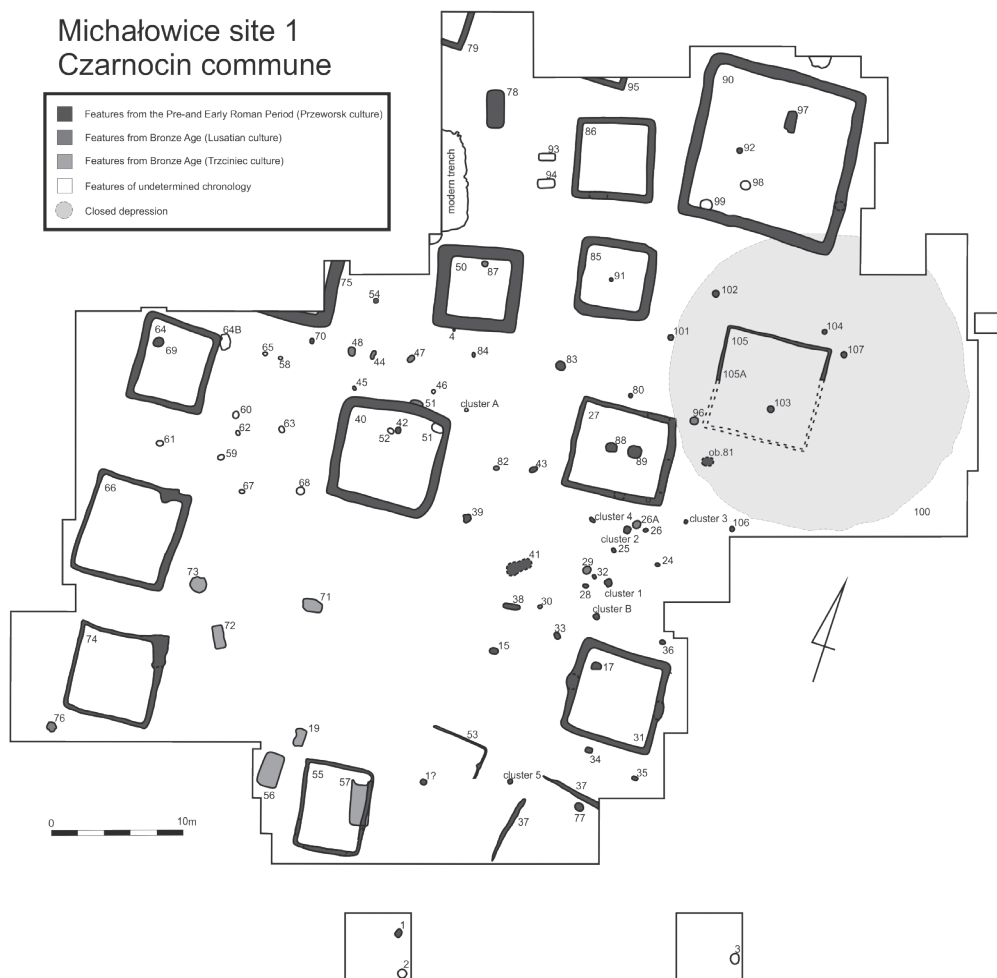
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<sup>3</sup> Previous field works, conducted at the site in 1982 and in 1990-1991, were test excavations (cf. Kaczanowski *et al.* 1984a).





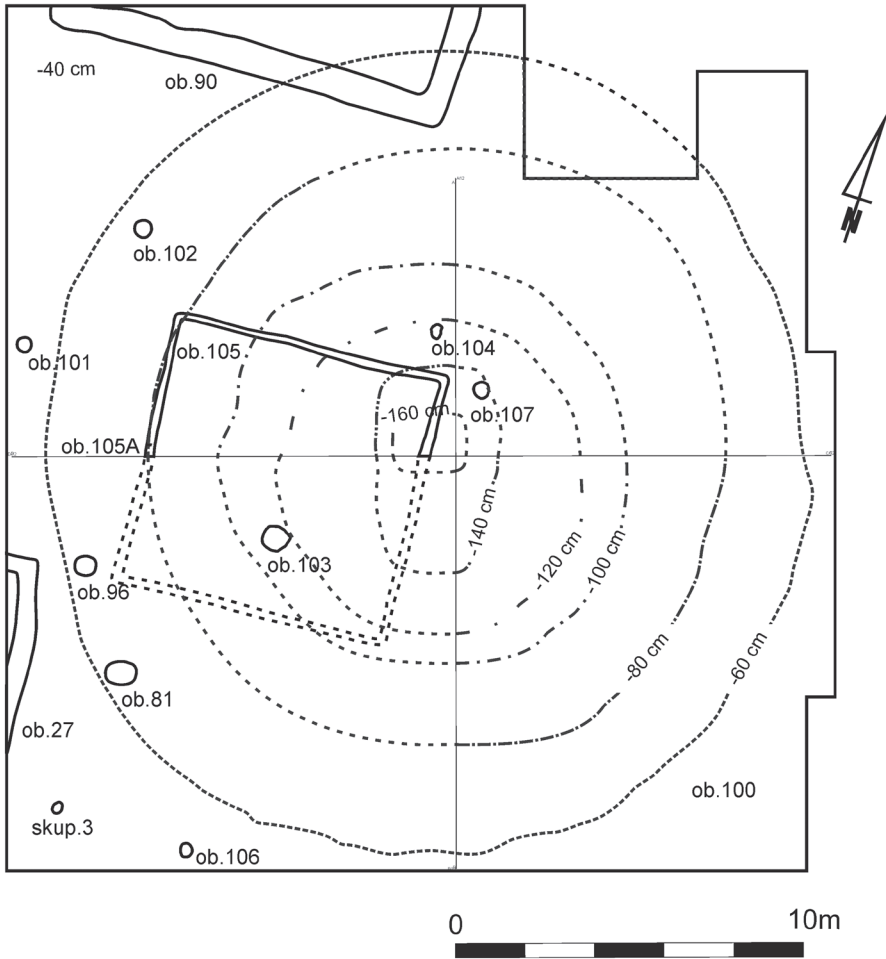


**Fig. 2.** Michałowice, site 1, Czarnocin commune. Plan of the cemetery (drawn by J. Zagórska-Telega and J. Pikulski)

for a settlement (Maruszczak 1954; Kołodyńska-Gawrysiak *et al.* 2013, 30). Depending on the intensity of soil erosion it could take from several to few thousands years for a closed depression to completely fill with sediment<sup>5</sup>.

Graves and a groove-type feature attributed to the Przeworsk culture were dug into the *wymok*, which indicates that the latter must have been completely filled up 2000 years ago. However, it is worth noticing the lack of older features in this place. Such features, dated to the Bronze Age and linked with the Trzciniec and Lusatian cultures, have been recorded during previous excavations on the Michałowice cemetery (Zagórska-Telega *et al.* 2011; Zagórska-Telega *et al.* 2012). This suggests that in the period when the site was occupied by the Trzciniec

<sup>5</sup> We would like to thank Ronny Schmidt from the Leipzig University for the information concerning closed depressions.



**Fig. 3.** Michałowice, site 1, Czarnocin commune. Feature 100 (drawn by J. Zagórska-Telega and J. Pikulski)

and then the Lusatian culture population, the closed depression could have periodically been filled with water. At the same time, it must be noted that the explored parts of the *wymok* yielded a noticeable (as for the standards of the Michałowice cemetery) collection of flint artefacts along with single, undistinctive fragments of pottery, which were found mainly in the bottom part of the feature.

The fill of feature 100 (i.e. the *wymok*) produced a total of 8 artefacts made of siliceous rock (Fig. 4), differing in shape and function. In terms of raw material, Jurassic flint is clearly predominant (6 pcs). Additionally, one artefact made of Świeciechów flint (Fig. 4: 1) and one strongly burnt piece (Fig. 4: 7) were found. The majority of the discussed inventory are re-touched tools. Most numerous among them are small re-touched blades (3 pcs), preserved only in fragments (including one which was strongly burnt). The second group are truncated blades (2 pcs) (Fig. 4: 4, 6), with distinct wear traces in the form of sickle gloss. The next group makes one end scraper (Fig. 4: 5). Another interesting find is a flake removed from a

larger retouched tool (Fig. 4: 3). The last artefact is a small, polyhedral chunk of flint, with no distinctive traces.

As mentioned, the flint inventory is comprised of fragments of retouched blades, truncated pieces, and one end scraper on a blade. Such inventories are characteristic of the Early Neolithic communities, such as the Malice culture for example (Wilczyński 2011, 515–519). Similar artefacts can also be found in older Linear cultures (Wilczyński 2014, 85). The only artefacts that can be associated with a younger period are the fragment of a tool with surface retouch (Fig. 4: 3) and the blade fragment made of Świeciechów flint (Fig. 4: 1). Both pieces resemble the forms and raw materials commonly used in the Funnel Beaker culture (Balcer 2002)<sup>6</sup>.

The chronological position of the flint artefacts from Michałowice could only be determined with more precision if they were accompanied by pottery sherds which allow for more narrow dating. Unfortunately, no such co-occurrence was recorded in the discussed case.

The burials discovered in the discussed season are cremations in pits or urns, typical of the Przeworsk culture population. Most of them had been considerably damaged by deep ploughing. This applies for example to feature 101 (Fig. 5), where burnt human bones and tiny fragments of vessels were recorded already in the topsoil. At the depth of 30 cm, immediately beneath the topsoil layer, a small cluster of bones was recorded and accompanied by a damaged knife and spring scissors of A. Knaack type Ib (1978, 18-19) (Figs 5: 1; 6: 1); the outline of the grave pit could not be identified. The introduction of spring scissors in the Przeworsk culture is commonly credited to Celtic influences (Dąbrowska 1988, 131). It should be noted that scissors are widely regarded as a status marker, highlighting the prominent social position of a deceased male. They frequently occur in rich burials sometimes containing entire sets of weapons, and also in “prince” burials (Godłowski 1960, 42; 1977, 95; see also Knaack 1978, 26–31, 34–37). Scissors could have played various functions, depending on their size and the type of metal used in their manufacture. Large, iron forms known from male burials are believed to be working tools, used for shearing sheep (Dymaczewski 1958, 407; Szydłowski 1964, 153; Godłowski 1977, 94–95). They might also play a ritual and magical role, for example in ceremonies connected with initiations or a first haircut (Kietlińska 1959, 103). Smaller scissors, made of bronze or silver and occurring in “prince” graves, may have been used as grooming accessories (Kostrzewski 1919, 146). It is worth noticing that smaller scissors are also sometimes discovered in female burials. Perhaps, in such cases they should be regarded as status indicator rather than a tool. It should also be noted that miniature scissors occur in the burials of women and children. These artefacts, dated to the transition between the Early and Younger Roman Period, are interpreted as amulets (Andrzejowski 2000; Madyda-Legutko *et al.* 2003; 2005; Florkiewicz 2011; see also Beilke-Voigt 1994).

It is also worth noticing that an iron spur discovered not far from feature 101 may possibly be connected with this burial (Fig. 5: 2). Such spurs are classed to type E2 in J. Ginalski classification, and are common in the Przeworsk culture in the developed phase B2 and phase C1a (Ginalski 1991, 61–62). Spurs, especially when found singly in burials, are widely considered to be status markers (Godłowski 1960, 40–41; Kontny 2002, 103; Zagórska-Telega 2000, 315)<sup>7</sup>. Such an interpretation of both the scissors and the spur seems to be confirmed by the results of the anthropological analysis, which have shown that the bone remains retrieved from the burial in question belonged to a child aged *Infans*.

<sup>6</sup> We wish to heartily thank B. Pilarski for the identification of forms and the cultural attribution of flint artefacts together with their drawing documentation.

<sup>7</sup> In western and northern Europe spurs often occur in burials of older, rich and powerful men, which additionally supports this interpretation (Steuer 1992, 238; Ravn 2003, 27).

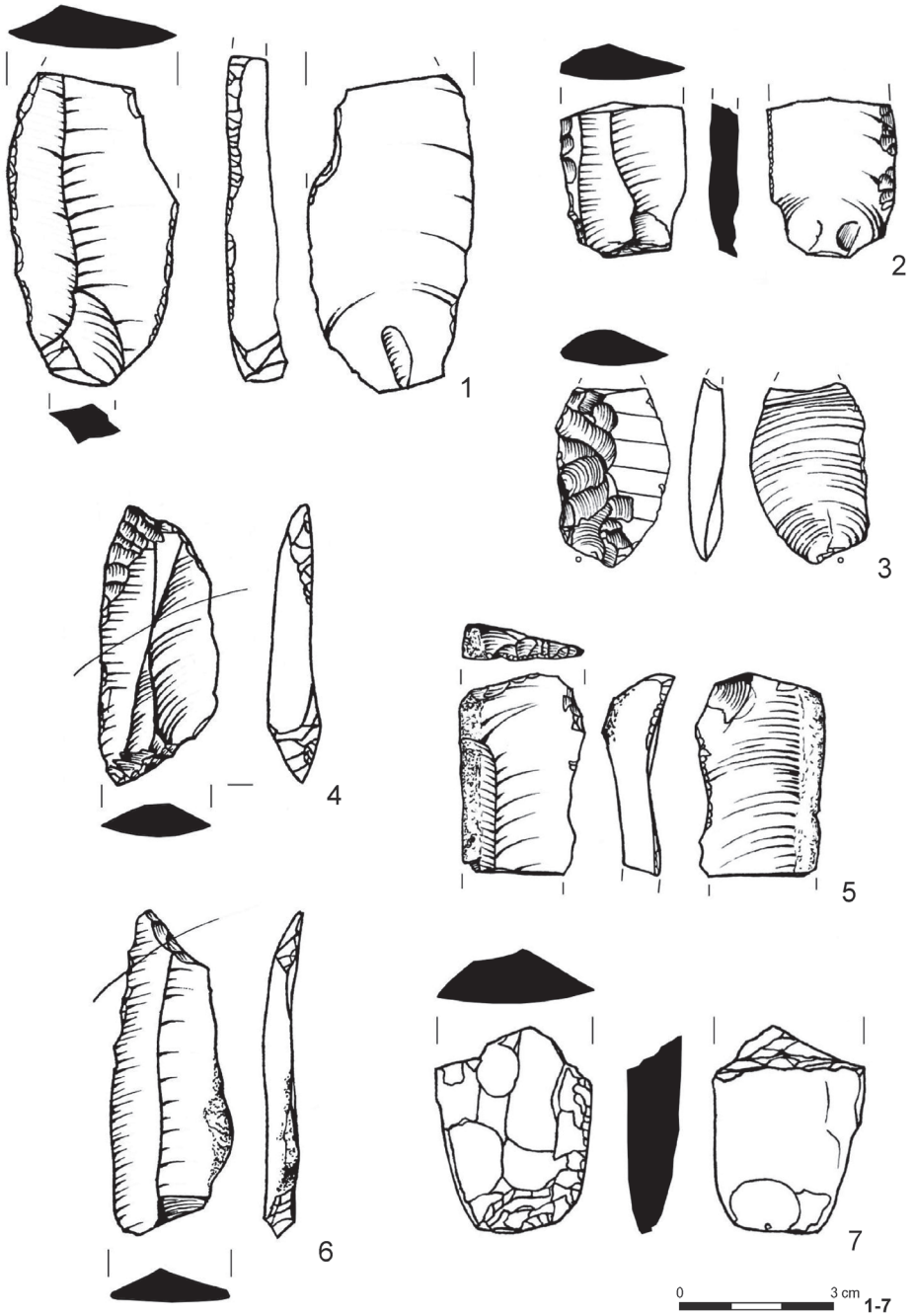
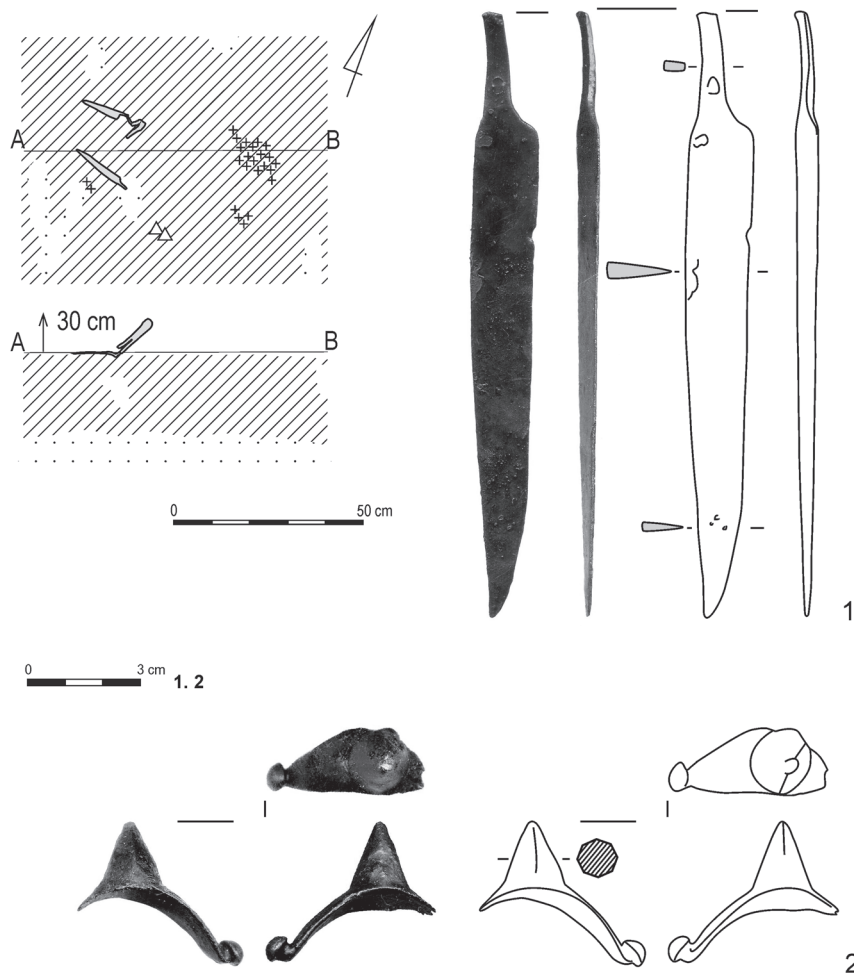
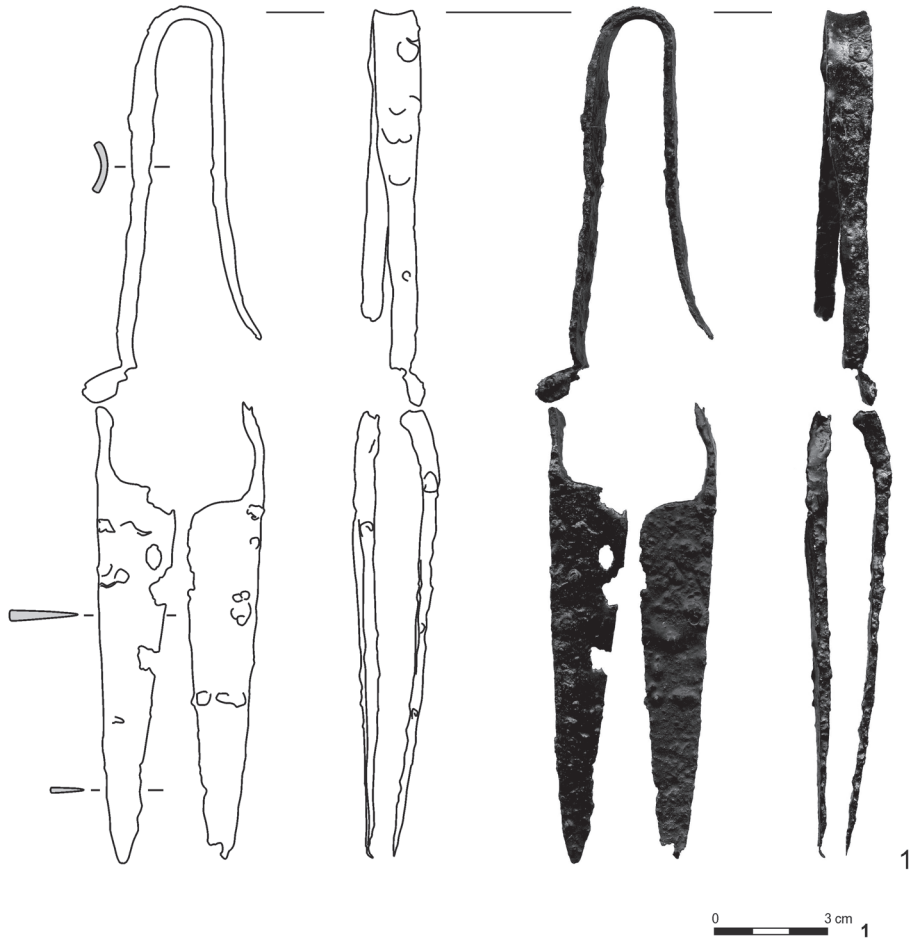


Fig. 4. Michalowice, site 1, Czarnocin commune. Flint artefacts from feature 100; 1-3: Jurassic flint; 3: Świeciechów flint (drawn by B. Pilarski)



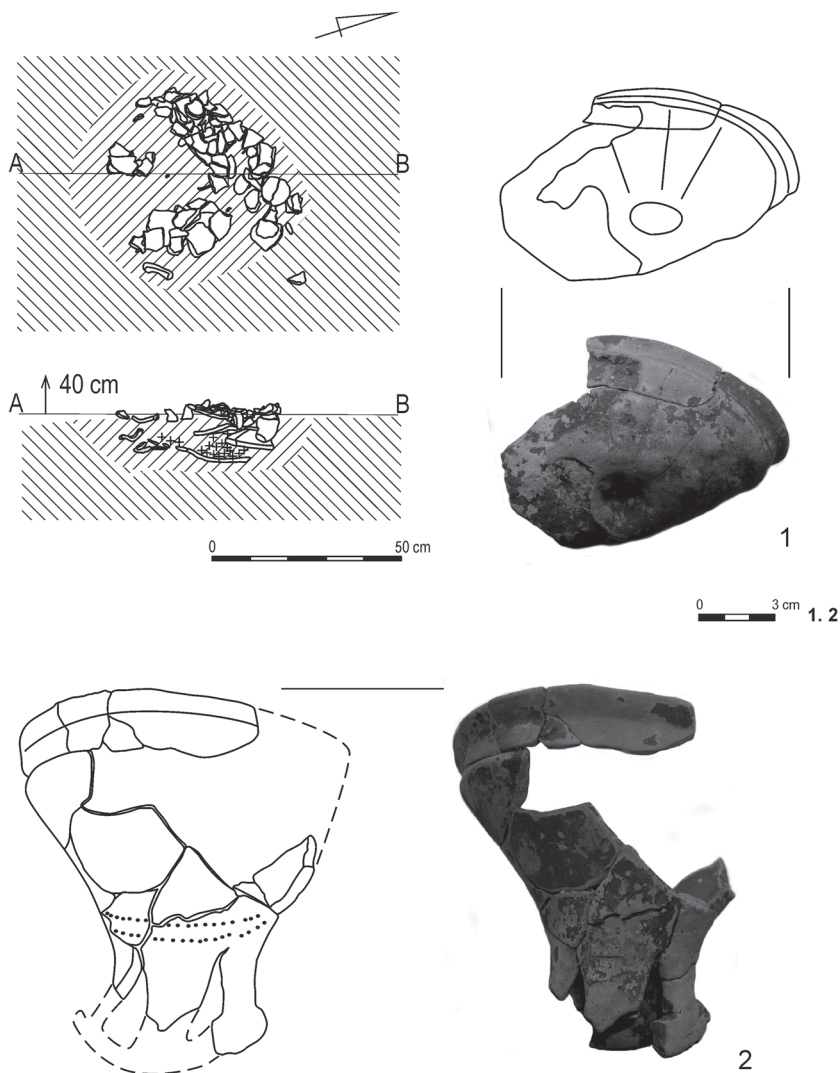
**Fig. 5.** Michałowice, site 1, Czarnocin commune. Grave goods from feature 101; 1, 2: iron (drawn by J. Zagórska-Telega)

Among the less damaged graves, a burial designated as feature 103 deserves particular attention (Fig. 7). Numerous fragments of strongly burned pottery were discovered in its vicinity as early as during the removal of the topsoil. At the depth of 40 cm, a cluster of pottery sherds became clearly discernible. These sherds originated from several considerably deformed and fragmented vessels, including two small bowls (Fig. 7: 1), a beaker on an openwork foot (Fig. 7: 2), and a roughly executed vessel with one handle. Slightly beneath the mentioned cluster, a large number of burnt human bones were found covered with a small bowl placed upside down (Fig. 8: 2). The bones were discovered in a very poorly preserved urn having black, smooth surfaces decorated with meander motifs. The vessel seemed to have originally been very poorly fired or even only dried. This may corroborate the hypothesis proposed by some of the scholars who believe that urns were sometimes made only for the purpose of a funeral and the quality of



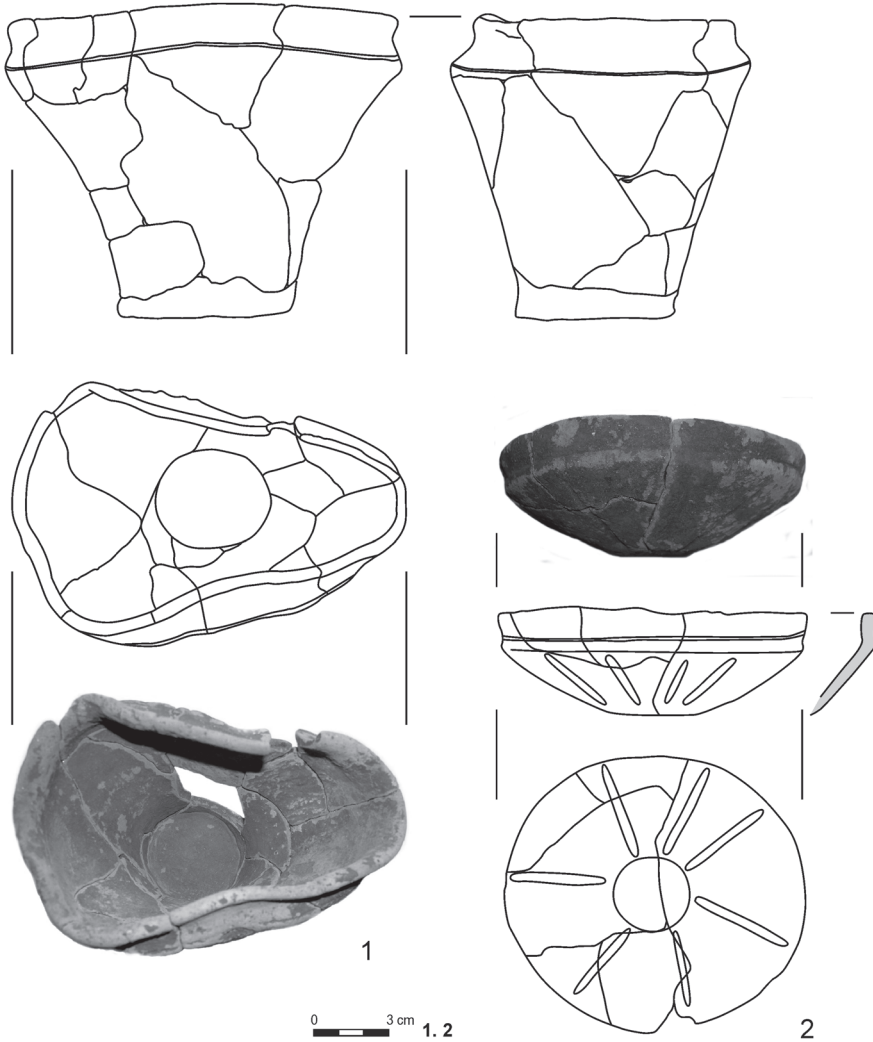
**Fig. 6.** Michałowice, site 1, Czarnocin commune. Grave goods from feature 101; 1: iron (drawn by J. Zagórska-Telega)

their manufacture did not always allow for their everyday use (Czarnecka 1990, 90; 2004, 101; Stasiak-Cyran 2004, 179). In a short distance to the south from the urn, a small knife (Fig. 9: 1) and a belt buckle (Fig. 9: 2) were found, while an awl was discovered next to the urn's bottom. The above objects allow us to date grave 103 to the developed phase of the Early Roman Period or the beginnings of the Younger Roman Period. Such a chronology is suggested by the buckle representing group D type 1 in R. Madyda-Legutko (1986) classification. In the Przeworsk culture such objects occur throughout the whole of the Roman Period, but are most often represented in phase B2. The proposed dating is also confirmed by the vessel on the openwork foot. Vessels of this kind are only incidentally discovered in Przeworsk culture cemeteries. They are known primarily from sites situated along the upper course of the Vistula river, such as for example Gościeradów in the Kraśnik district, Chmielów Piaskowy in the Ostrowiec district, or Grzybów, in the district of Staszów (Niewęglowski 1982, 69, 76–77, 93, figs 6: h; 11: b; 17; Godłowski, Wichman 1998, 32, pl. XLVIII: 32/2; Garbacz 2000, 133–134, pls XXXV: 5–6;



**Fig. 7.** Michałowice, site 1, Czarnocin commune. Grave goods from feature 103; 1, 2: clay (drawn by J. Zagórska-Telega and P. Jeliczko)

XXXVI: 1; LXVII: 6), but also from the cemetery at Prusiek (Sanok district) on the upper San river (Madyda-Legutko *et al.* 2006, 64, fig. 6). The chronology of vessels on openwork supports is limited to the developed phase B2 of the Early Roman Period and phase C1a of the Younger Roman Period. Small bowls with rounded bottoms classed as type VI/2 according to T. Liana (1970, 440) have broader chronological frameworks. The vessels in question commonly occur in Przeworsk culture sites throughout Roman Period, but are most numerous in the developed B2 phase and in phase C1a (Liana 1970, 440; Godłowski 1977, 143–144; Dobrzańska 1990, 54; Rodzińska-Nowak 2006, 141–142). They are often decorated with vertical grooves spreading radially from the vessel's bottom, ornamentation widely believed to imitate that of glass



**Fig. 8.** Michałowice, site 1, Czarnocin commune. Grave goods from feature 103; 1, 2: clay (drawn by J. Zagórska-Telega and P. Jeliczko)

vessels (Liana 1970, 440; Rodzińska-Nowak 2006, 142). It should be noticed that the small bowl from grave 103 was turned upside down and used as a cover for the urn containing the bones. The custom of covering urns with other vessels, most often goblets or bowls, turned upside down, can be observed on other Roman Period cemeteries attributed to the Przeworsk culture, such as for example Młodzikowo in the Środa Wielkopolska district, Starachowice in the Starachowice district, Spicymierz in the Poddębice district, Tarnów in the Opole district, Zadowice in the Kalisz district, or Łęgonice Małe in the district of Przysucha (Dymaczewski 1958, 203, 224, figs 56; 94; Jamka 1959, 35–37, figs 5–6; 9–12; Kietlińska, Dąbrowska 1963, 208; Godłowski, Szadkowska 1972, 161; Kaszewska 1975, 147; Liana 1976a, 72, 74–75, 78, 97, figs 12; 17; 23).



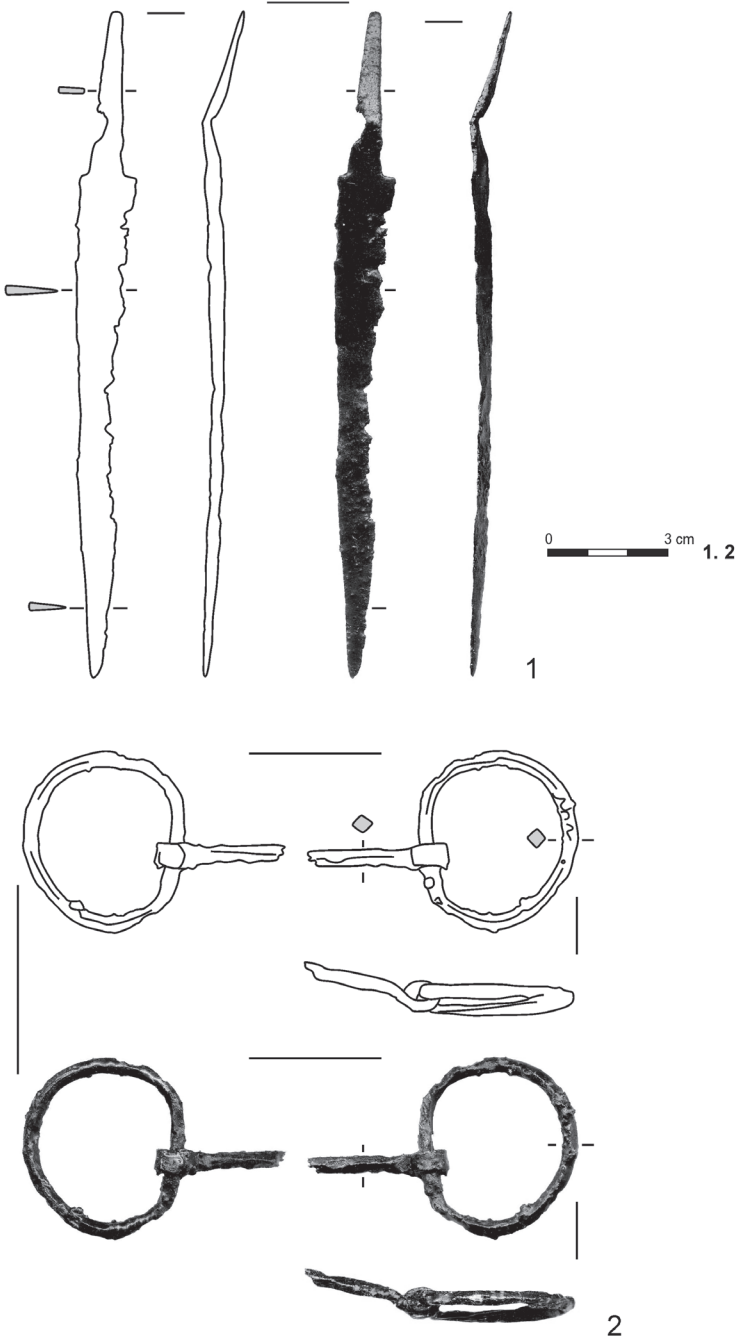


Fig. 9. Michałowice, site 1, Czarnocin commune. Grave goods from feature 103; 1, 2: iron (drawn by J. Zagórska-Telega)

But the largest number of urn cremations covered in this manner was discovered in Wymysłowo in the Gostyń district (Jasnosz 1952, 48, 82, 110, 123, 158, 177–179, 217, figs 54; 108; 148; 161; 224; 263; 267; 336). The discussed custom is regarded as a manifestation of magical, apotropaic behaviours, applied particularly often to burials of women and children (cf. Liana 1968; Czarnecka 1990). Unfortunately, the state of preservation of the bones discovered in grave 103 does not allow the sex of the deceased to be determined.

It is worth noticing that, apart from the urn, all of the other vessels discovered in grave 103 revealed distinct traces of secondary burning in a pyre. It is very likely that they originally contained food or liquids offered to the deceased for his journey to the otherworld (cf. Madyda-Legutko *et al.* 2005, 185; Madyda-Legutko, Zagórska-Telega 2006), or were the remains of funeral feasts or other rituals accompanying the burial (Jamka 1936, 57; Kempisty 1968, 404; Błażejowski 1998, 62, 173). K. Czarnecka even suggests that the amount of pottery may reflect the splendour of a funeral feast, and by extension also the social position of the deceased (Czarnecka 1990, 90).

Another relatively well preserved grave was feature 104 (Fig. 10). A large amount of bones were found in a poorly preserved urn having black, smooth surfaces. Analogically to the situation recorded in grave 103, the urn was poorly fired or only dried (see above). The urn was accompanied by a small bowl belonging to Liana type VI/2 (1970, 440), which survived intact (Fig. 10: 1). Grave 104 also yielded two massive iron brooches (Fig. 10: 2, 3) with the bow strongly bent in the upper part, and a widened head touching a ring in the middle of the bow, which do not find precise counterparts among the brooches of Almgren's (1923) group IV. They should be classed to variant 1 of trumpet fibulae distinguished by T. Liana (1970, 442–443). Such brooches were often made of iron and were placed in male burials, while bronze pieces were more common in female graves. Brooches of Liana variant 1 occur either singly or in pairs. The details of their construction, and the shape of the head in particular, reveal a resemblance to strongly profiled fibulae, although possibly to type A67 rather than to chronologically later type A68 (Liana 1970, 443). Iron trumpet brooches of variant 1 are believed to be a form typical of the Przeworsk culture (Liana 1976b, 140).

It is worth noting that a twisted copper wire has survived in one of the brooches discovered in grave 104 and that it is set in a groove on the top of the fibula head (Fig. 10: 3)<sup>8</sup>. A similar groove can be seen on the crest in the middle of the bow. It is highly likely that the inlaid decoration has originally been present also in this place. The second fibula from grave 104 has a similar form.

The custom of decorating dress items with inlay appears in Central and Northern Europe in the Early Roman Period, but becomes particularly widespread in the developed phase B2 and on the Early/Younger Roman Period transition (Holmquist 1951; Tejral 2002). Inlaid trumpet brooches commonly occur in the Przeworsk culture, but also in the territory of Czech Republic, Slovakia, Norway, and on the lower Elbe river. According to Svoboda, they developed from patterns typical of the Danube basin (Svoboda 1948, 7; Tejral 1970, 188; Peškař 1972, 72–75). It should be noticed, however, that the trumpet brooches known from the Przeworsk culture sites were usually inlaid with silver. Such decoration was recorded on the artefacts known from the cemeteries at Kurza in the Kalisz district or Wólka Domaniewska in the Radom district, where they were retrieved from features dated to late B1 phase and phase B2 (Ołędzki, Teske 1987, 79, fig. 4: b, d; Ołędzki 1997, 63, pl. II: 2, 3). A fibula from grave 59 in the cemetery at Domaradzice in the Rawicz district is ornamented in a similar manner (Kostrzewski 1954, 185, fig. 55: 3). This grave also yielded three belt finials representing type 1 variant 3 in R. Madyda-Legutko classification

<sup>8</sup> We would like to express our gratitude to M. Biborski from the Laboratory of Archaeometallurgy of the Institute of Archaeology, Jagiellonian University, for carrying out the metallographic analysis.

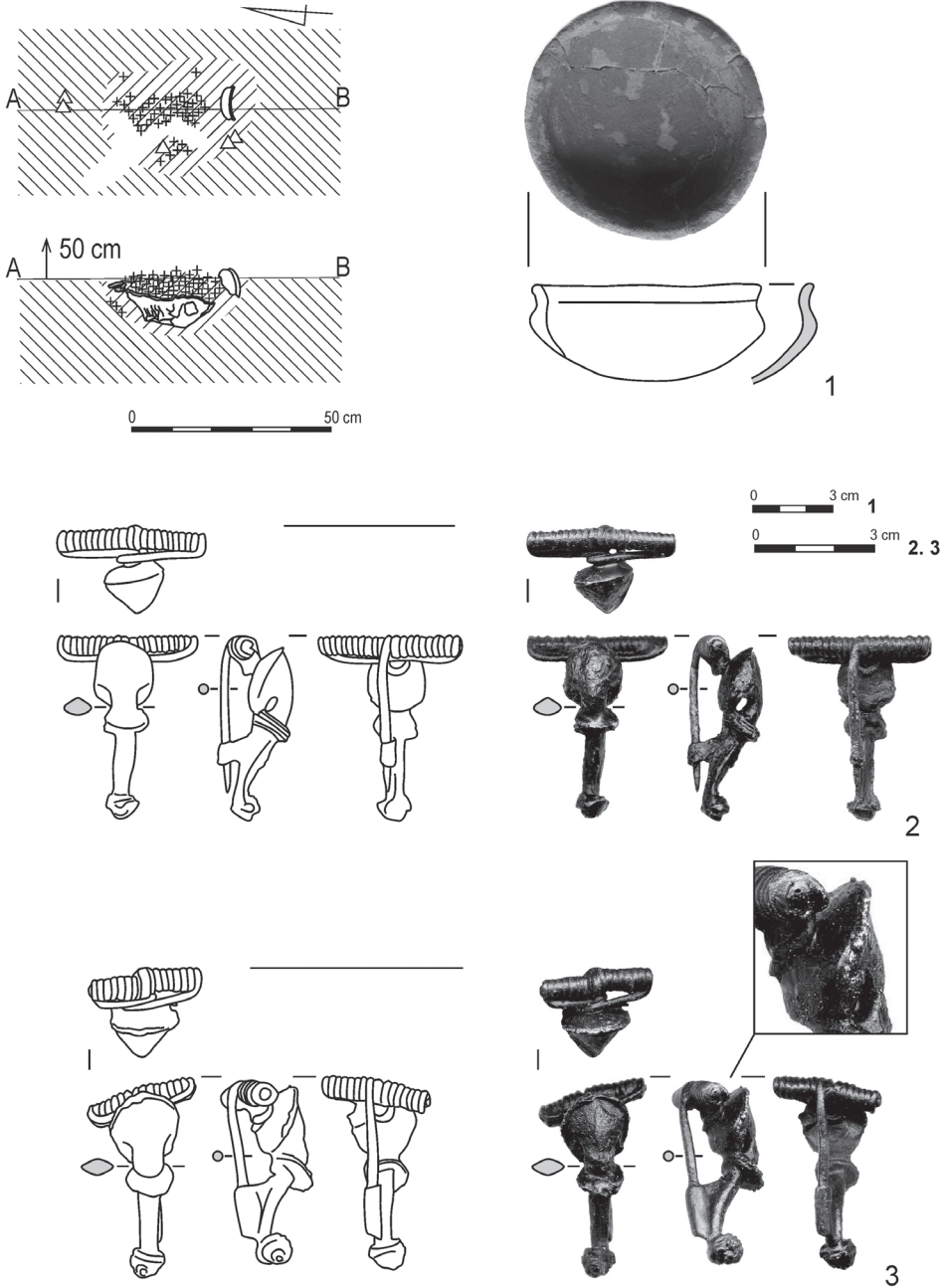
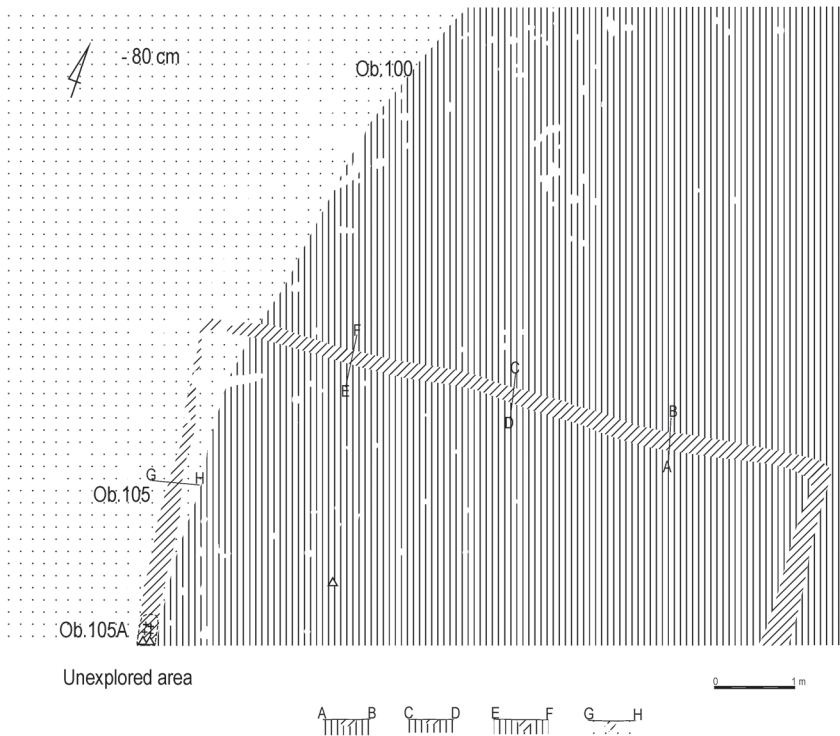


Fig. 10. Michałowice, site 1, Czarnocin commune. Grave goods from feature 104; 1: clay; 2: iron; 3: iron with copper (drawn by J. Zagórska-Telega and P. Jeliczko)



**Fig. 11.** Michałowice, site 1, Czarnocin commune. Features 100 and 105 (drawn by J. Zagórska-Telega and J. Pikulski)

(2011, 17–18). In her opinion, such fittings commonly occur in male burials from phases B1 and B2 of the Roman Period (Madyda-Legutko 2011, 20). Feature 22 from the Łętowice cemetery in the Tarnów district, which contained elements of weaponry typical of that period, also belongs to phase B1. An iron trumpet brooch recovered from this feature has three characteristic grooves for inlaid decoration, although the inlay itself has not survived (Szpunar 1990, 252, 259, fig. 6: n). Within the range of the Przeworsk culture one can also find iron trumpet brooches decorated with bronze inlay, which belong to T. Liana variant 2 (1970, 442–443). However, this decoration occurs in grooves placed on the fibula's foot or bow. An example of such a brooch was discovered in the cemetery in Tarnów, Opole district (Godłowski, Szadkowska 1972, 86–87, footnote 27; Godłowski 1977, 10).

In the course of the exploration of the north-west quarter of the feature 100, the northern arm and the north-western and north-eastern corners of a groove-type feature (feature 105) were also revealed (Fig. 11). The feature was first recorded only at the depth of 80 cm beneath the ground level, which is in its bottom part. At the mentioned depth, the northern arm was 800 cm long and approximately 30 cm wide. In the western arm, near the feature's bottom, there was a small concentration of burnt human bones found, and which was designated as feature 105a. Although feature 105 has not been fully explored, it most likely repeated the square shape and orientation according to cardinal directions shared by the other groove-type features known from the Michałowice cemetery. The distribution of groove-type features within the mentioned cemetery is

striking. Their arrangement seems planned rather than accidental (Fig. 2). The features in question were regularly spaced, and formed rows aligned along the north-south axis. It should be emphasised that the features did not cut each other. This allows us to assume that the entire complex comes from the same time, while the observations made in cross-sections suggest that the arms of groove-type features were not filled back immediately but remained open for a longer time. It also seems very likely that all the features functioned simultaneously and for a relatively long time. On the other hand, it is hard to imagine (as correctly noticed by T. Dąbrowska) that on digging the first grave the entire area of the cemetery which was to be used for the next several hundred years was delineated (Dąbrowska 2007, 262). It is also worth noticing the open space in the central part of the cemetery, which perhaps should be interpreted as the place for performing closer unidentified rituals connected with the cult of the dead (cf. Czarnecka 1999, 168).

From the territory occupied by the Przeworsk culture there are 13 sites known where groove-type features were discovered, mostly dated to the Early Roman Period<sup>9</sup>. In the majority of cases these were single features; a higher number of such features were recorded only in cemeteries at Kryspinów, Szarbia, and Kietrz (Godłowski 1969; 1970; 1971; 1972; 1973; 1974; 1976; 1978; 1986; Godłowski, Madyda 1976; Gedl 1972; 1984; 1985; Naglik 2002). The largest number of groove-type features are known from the cemetery in Kryspinów, where the excavations lasting many years brought the discovery of 10 such structures. Only slightly less, namely 9 features, were discovered in the Szarbia cemetery. In Kietrz there were 11 groove-type features discovered, but only 6 of them can be linked with the Przeworsk culture cemetery. It is worth remembering that, apart from Kryspinów, no other site where groove-type features were revealed has been explored in full.

It is worth noting that sites with groove-type features concentrate in the southern part of the Przeworsk culture range, first of all in the upper Vistula basin, which is in the territory previously occupied by the Tyniec group. The only exceptions are the Kietrz cemetery in Silesia and a single feature from Nowa Żelazna in Masovia. At the present stage of research the function of groove-type features cannot yet be determined. It seems that they should not be interpreted just as

<sup>9</sup> The list of Przeworsk culture sites where groove-type features were discovered: **1. Gościeradów**, site 1, commune of Gościeradów, Kraśnik district, Lubelskie province; feature with no number (Niewęglowski 1982); **2. Górka Stogniewska** (properly: Górka Stogniowska), commune of Proszowice, Proszowice district, Małopolskie province Feature no 3 (Kaczanowski *et al.* 1982; 1984b); **3. Kazimierza Mała**, commune of Kazimierza Wielka, Kazimierza Wielka district, Świętokrzyskie province; unpublished materials from K. Tunia's excavations; **4. Kietrz**, site 1, commune of Kietrz, Głubczyce district, Opolskie province; features no.: 600, 760, 1588, 2976, 2978, and 3186 (Gedl 1972; 1984; 1985); **5. Korytnica**, site 1, commune of Sobków, Jędrzejów district, Świętokrzyskie province; unpublished materials from A. Przychodni's excavations; **6. Kryspinów**, site 2, commune of Liszki, Kraków district, Małopolskie province; features no.: 8, 20, 33, 35, 36, 42, 50, 52, 73, and 89 (Godłowski 1969; 1970; 1971; 1972; 1973; 1974; 1976; 1978; 1986; Godłowski, Madyda 1976); **7. Michałowice**, site 1, commune of Czarnocin, Kazimierza Wielka district, Świętokrzyskie province; features no.: 27, 31, 37, 40, 50, 53, 55, 64, 66, 74, 76, 79, 85, 86, 90, 95, and 105 (Pikulski, Zagórska-Telega 2011; Zagórska-Telega *et al.* 2011; 2012; Zagórska-Telega, Pikulski 2014); **8. Mierzanowice**, site 5, commune of Wojciechowice, Opatów district, Świętokrzyskie province; features no.: 5, 7, 10, and 20 (Wrotek 1962; 1963; 1964); **9. Nowa Żelazna**, commune of Magnuszew, Koziencice district, Mazowieckie province; feature with no number (Cieślak-Kopyt 2010); **10. Pelczyska**, site 6, commune of Złota, Pińczów district, Świętokrzyskie province; feature no. 45 (Rudnicki 2005); **11. Szarbia**, site 7, commune of Koniusza, Proszowice district, Małopolskie province; features no.: 1, 3, 11, 15, 44, 46, 48, 49, and 84 (Naglik 2002); **12. Trójczyce**, site 1, commune of Orły, Przemyśl district, Podkarpackie province; feature with no number (Koperski 1972; Poradyło 2004); **13. Zawada**, site 1, commune of Połaniec, Staszów district, Świętokrzyskie province; feature 186 (Chomentowska, Michalski 1992).

a specific form of burial, as is suggested by the very small amounts of burnt human bones, vessel shards, and metal artefacts which are discovered in such features, and mostly in their upper layers. However, groove-type features are the relics of some structures that undoubtedly were connected with the functioning of a cemetery (cf. Zagórska-Telega, Pikulski 2014).

### 3. Anthropological analysis

The aim of the anthropological analysis was to establish the number of individuals buried in the investigated archaeological features, and to determine their age at death, the sex for adult individuals, and the degree to which the bones had been burned. The first stage of the analysis was the anatomical segregation of the bone material into particular elements of the skeleton. In the course of this segregation, animal bones were identified and separated from human remains.

The age at death was determined based on anatomical and morphological criteria commonly applied in anthropology (Fairgrieve 2008). For adult individuals, their age at death was established mainly based on the obliteration of cranial sutures (White, Folkens 2005), and using standard age categories (after Kaczanowski 1992). The determination of sex was carried out for adult individuals only, and relied on the observation of diagnostic morphological elements of the skeleton (White, Folkens 2005). The temperature at which the bones were burned was estimated based on the colour of the burnt bones. The cream-white, cream, or cream-beige colour observed in the analysed material suggest that the bones were heated to more than 800 °C (after Fairgrieve 2008), which means that the temperature in the place where they were burned might have reached 1000–1200 °C.

Burnt bones retrieved from 7 archaeological features, 2 clusters of bones, as well as those identified during the exploration of cultural layers were included in the anthropological analysis.

#### Feature 101

Bones strongly and evenly burnt, weight 66 g. The preserved elements include small fragments of delicate bones from cranial vault, sutures unfused, and fragments of tooth roots. Elements of postcranial skeleton include fragments of ribs and fragments of long bones diaphyses.

Age: probably an individual aged *Infans*, sex: undetermined

#### Feature 102

Bones strongly and evenly burnt, weight 27 g. The preserved elements include small fragments of cranial vault and fragments of long bones diaphyses.

Age: adult individual, sex: undetermined

#### Feature 103

Bones strongly and evenly burnt, weight 226 g. The preserved elements include fragments of delicate bones from cranial vault, the left petrous part of the temporal bone, and fragments of roots of permanent teeth. The identified fragments of sutures are unfused. Postcranial skeleton is represented by fragments of long bones diaphyses, fragments of vertebrae, and a fragment of the first metatarsal bone.

Age: *Adultus*, sex: undetermined

#### Feature 104

Bones strongly and evenly burnt, weight 1308 g. The preserved elements include fragments of delaminated bones from the cranial vault, a fragment of the frontal process of the left zygomatic

bone, fragments of maxilla with dental alveoli, the left petrous part of the temporal bone, and fragments of roots of permanent teeth. The identified fragments of sutures are unfused. Postcranial skeleton is represented by fragments of long bones epiphyses and diaphyses, fragments of vertebrae and ribs, and a fragment of pelvis. There were also found fragments of the distal epiphysis of the humerus and the proximal epiphysis of the radius.

Age: *Adultus*, sex: undetermined, probably female

The distribution of bones representing particular parts of the skeleton within the urn shows that the anatomical order of the remains was not kept. Among the cremated human remains, burnt fragments of animal bones were found.

#### Feature 105

Bones strongly and evenly burnt, weight 34 g. The preserved elements include small fragments of cranial vault and fragments of roots of permanent teeth. Postcranial skeleton is represented by fragments of long bones diaphyses.

Age: adult individual, sex: undetermined

#### Feature 105A

Bones strongly and evenly burnt, weight 0.2 g. Only small fragments of bone are preserved.

Age: undetermined, sex: undetermined

#### Feature 107

Bones strongly and evenly burnt, weight 56 g. The preserved elements include small fragments of cranial vault, a fragment of the mandible with dental alveoli, and fragments of roots of permanent teeth. Postcranial skeleton is represented by fragments of long bones diaphyses.

Age: adult individual, sex: undetermined

Among the cremated human remains, burnt fragments of animal bones were found.

#### Cluster A/excavation unit CI/2012

The bone strongly and evenly burnt, weight 0.5g. A small fragment of a long bone diaphysis is preserved.

Age: undetermined, sex: undetermined

#### Cluster A/ excavation unit CXVIII/2012

Bones strongly and evenly burnt, weight 17g. The skull is represented by small fragments of delicate bones of the cranial vault and fragments of teeth roots. The identified fragments of sutures are unfused. Postcranial skeleton is represented by fragments of diaphyses and epiphyses of long bones.

Age: probably an individual aged *Infans*, sex: undetermined

Each of the analysed features contained the remains of a single individual, however, the considerable fragmentation of the material made it impossible to determine the sex of the deceased. Only for the urn grave designated as feature 104 the preserved fragments allow us to assume that the bone remains belonged to a female. Burnt bones recovered from the identified clusters are few, and the lack of diagnostic elements did not allow for the precise determination of age at death. The cemetery at Michałowice is considerably damaged, which is why single bones translocated from the destroyed upper parts of graves are often found during the exploration. Small clusters of bones (ranging in weight from 0.1 to 17 g) were composed of tiny, strongly burnt fragments of long bones diaphyses.

#### 4. Summary

The excavations carried out in 2012 resulted in the discovery of only six cremation burials and a groove feature connected with the Early Roman Period. However, it is worth noting that the features containing precise chronological indicators date to the developed stage of phase B2 or even the transition between the Early and Younger Roman Period, while most of the features discovered in previous seasons dated to phase B1. Furthermore, the eastern boundary of the Przeworsk culture cemetery was most likely identified, as the features attributable to this cultural unit were revealed only in the western part of the area explored in 2012. The excavations in the Michałowice site will be continued.

#### Badania wykopaliskowe na wielokulturowym stanowisku 1 w Michałowicach, gm. Czarnocin, woj. świętokrzyskie w sezonie 2012

Badania wykopaliskowe na wielokulturowym stanowisku 1 w Michałowicach prowadzone są od roku 2008. Do chwili obecnej odsłonięto obszar o powierzchni blisko 32 arów, odkrywając 107 obiektów, związanych głównie cmentarzyskiem ludności kultury przeworskiej (por. Pikulski, Zagórska-Telega 2011; Zagórska-Telega *et al.* 2011; 2012) (Ryc. 2). W sezonie 2012 badania koncentrowały się w północno-wschodniej części stanowiska i miały na celu weryfikację badań geofizycznych przeprowadzonych przez mgr. P. Wronieckiego w roku 2010 (por. Wroniecki 2012). W trakcie badań wykopaliskowych wyeksplorowano obszar około 6 arów, odsłaniając bardzo dużych rozmiarów (ok. 30 m średnicy) naturalne zagłębienie bezodpływowe, tzw. wymok, określone jako obiekt 100. W obiekt ten zostało wkopanych sześć grobów ciałopalnych kultury przeworskiej (obiekty 101–104, 106, 107) oraz obiekt rowkowy związany z tą samą jednostką kulturową (105). Odkryte w trakcie tegorocznych badań groby były w znacznym stopniu zniszczone przez głęboką orkę. Zostały one wyposażone w przedmioty charakterystyczne dla pochówków kultury przeworskiej, m.in. w elementy stroju w postaci zapinek (obiekt 104, Ryc. 10: 2, 3) i sprzączek do pasa (obiekt 103, Ryc. 9: 2), jak również nożyce żelazne (obiekt 101, Ryc. 6) i nóż (obiekt 101, Ryc. 5: 1). Z obiektem 101 związana jest prawdopodobnie także ostroga żelazna (Ryc. 5: 2). W jednym z grobów (obiekt 103) odkryto koncentrację fragmentów ceramiki, pochodzących z kilku mocno zniekształconych i potłuczonych naczyń (Ryc. 7; 8). Wszystkie wspomniane obiekty należy datować na wczesny okres rzymski.

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