

KOLONIA RYCHŁOCICE SITE 1, PROVINCE OF ŁÓDŹ. CEMETERY FROM BRONZE AGE TO MIGRATION PERIOD

Introduction (W. Siciński)

Site 1 in Kolonia Rychłocice was discovered accidentally in 1974 during exploration of Piaśnica located near the road from Rychłocice to Siemichów. The contents of a multiburial urn grave of Pomeranian Urn culture were secured at that time. Rescue excavations on the newly found cemetery, marked as site 2 in Rychłocice, were conducted by Maria Jażdżewska from Museum of Pabianice City. Other survey works were done in 2000, which resulted in discovery of cremation Przeworsk culture graves. Then, the name and site number were changed to Kolonia Rychłocice site 1. The research was continued in the years 2001 and 2003, which resulted in discovery of 34 cremation graves of Pomeranian – Cloche Grave culture and Przeworsk culture, which now belong to Museum of Pabianice collection. Another stage were the excavations conducted by Museum of Archaeology and Ethnography in Łódź under the supervision of the author of this study. They were conducted in the years 2006–2007 and 2009–2011 due to the financial resources of Professor Konrad Jażdżewski Archaeological Research Foundation in Łódź. As a result, the whole Przeworsk culture cemetery was researched as well as greater part of Pomeranian – Urn culture cemetery. Due to the great dispersion of the grave groups it was impossible to determine its full scope. In total, the area of more than 86 ares was researched, on which 233 grave features were discovered including one damaged skeleton grave and one pit with pottery and flint material of Mierzanowice culture, 1 cremation grave of Lusatian culture from the fourth period of Bronze Age, 48 cremation graves of Pomeranian – Cloche Grave culture and 176 graves

of Przeworsk culture, one of which is probably a skeleton grave. Due to the lack of accessories eight pit graves were not classified culturally. The site was partially damaged because of various activities. The greatest destruction was done in the second half of 19th century when the area was used for agricultural reasons. At that time, forest was cut, tree trunk were burnt and removed, damaging and harming some of the graves. Marks of this activity were clearly visible on the excavated site. The following damages were done in the 1970s when sand was raised in the north-east part of the site for building purposes (Pomeranian – Urn culture grave 1 was harmed). The last serious damages were caused by deep ploughing which destroyed some of the graves, mostly urn ones which were not buried deep in the ground. Out of these graves, only bottom parts were saved. In order to save the site it was necessary to explore the greatest possible area of the cemetery.

The cemetery is located on the Warta river fluvial terrace, about 500 meters east from the current stream bed, in the north part of the village called Kolonia Rychłocice, locally called “Piekło”. The name is a reflection of the 19th century actions on the ground, that is forest cutting and using the ground for agricultural purposes. The site is located 400 meters on the south-east from site 2 in Siemichów, Przeworsk culture cemetery from early Pre Roman and Early Roman Influence period, and settlement from early – late Roman influence period and early Migration period.

Exploration of the cemetery provided huge amounts of chronologically and culturally diversified materials, some of which were unique.

Settlement in Early Bronze Age (J. Wicha, P. Papiernik)

During works on site 1 in Kolonia Rychłocice few materials from Bronze Age were collected. Among them, there were 125 fragments of Mierzanowice culture pottery and 12 flint objects, as well as two features, including a skeleton grave was discovered. Materials were identified in the central part of the site, in section 44 and 72 (fig. 2). Shreds of Mierzanowice culture vessels were found mainly in section 44 of a pit feature, only few, 4 pieces, were in the layer, such as flint objects, among which there was one exception, which was found in the feature. Skeleton grave was identified in section 85, just above Pomeranian Urn culture grave. The bones (skull with jaws) which were found in the grave underwent radiocarbon dating, which result is between 1893–1741 calBC (fig. 3). This in turn allows to join it with late phase of Mierzanowice culture in Małopolska. Discovered materials of Mierzanowice culture are a homogenic collection (fig. 3, 4) which on the basis of technological features as well as ornaments, such as double cord impressions and double cord impressions with a loop can be associated with its early developing phase (S. Kadrow, J. Machnik 1997, p. 29–53). Flint material discovered on the site includes mainly retouched shreds (fig. 7: 3, 4) and retouched metric shaving (fig. 6:2) made of imported raw materials. It can be associated with modern forms among flint monuments of Early Bronze Age (J. Kopacz, P. Valde-Nowak. 1987).

Lusatian culture cremation grave (W. Siciński)

Next, chronologically, is a pit, cremation grave of Lusatian culture from the IV Bronze Age period. Its content involved a few fragments of pottery and burnt adult human bones. Pottery fragments come from a vessel whose form is similar to tulip vessels which are characteristic to Trzciniec culture, but appear in Lusatian culture, especially in the IV period of the Bronze Age. Single, Lusatian culture graves rarely appear on archaeological sites. The closest is site 5 in Bieniędzice and site 4 in Strobin, district of Wieluń. The closest known Lusatian culture cemetery is on site 4 in Siemiech-

ów, district of Łask, about 800 meters north from the cemetery in Kolonia Rychłocice.

Pomeranian-Cloche Grave culture cemetery (W. Siciński)

It was possible to explore the majority of Pomeranian – Cloche Grave culture cemetery, that is 48 graves which had interesting and diversified burial ritual. Seven basic types of graves were distinguished, among which additional subtypes were assigned.

Type 1 are pit graves with unreadable outline of the pit. Burnt bones were put in the yellow sand layer. These are graves no. 39, 51, 54 and 88.

Type 2 are urn graves with unreadable outline of the pit. The urns were put in the yellow sand layer. This type includes graves no. 4, 164, 221 and 222.

Type 3 are graves in which urn was put in the grave pit. This type includes graves no. 42 – double urn grave, 53 – double urn grave, 107 and 216.

Type 4 is represented by one urn – pit, double grave no. 114 placed in the grave pit with partial stone construction and a niche.

Type 5 includes graves of various construction manner. Four subtypes can be differentiated among these.

Subtype 1 is a pit grave covered with a cloche in stone fortification. Such construction was observed in grave 98.

Subtype 2 is an urn burial covered with a cloche. Two such burials were identified – grave 84 and probably damaged grave 215. The urn covered with a basin was put in the grave pit on a stone base and covered with a cloche.

Subtype 3 includes urn graves in stone fortification. This subtype consists of graves 55 and 106. The urn covered with a basin was put on a base made of pebbles in the sand layer and covered with a cloche.

Subtype 4 is a symbolic grave where only big fragments of a cloche were put in the clear grave pit (grave 52).

Type 6 includes box graves. Due to the variety of their forms three subtypes can be differentiated.

Subtype 1 includes the biggest group of graves, which are identified as pit graves consisting of a stone box. These are graves 48, 49, 79, 170, 179, 200 and 205. In this case, burnt human bones did not create a tight concentration, but they were scattered in the grave pit.

Subtype 2 includes box graves covered with a cloche. The first one is an urn burial no. 232, the second one is a pit grave no. 233. Two parallel walls and the bottom were built out of stone tiles in the sand layer. At the top they were covered with huge pebbles. Urn was put in this construction (grave 232) or burnt human bones were put there (grave 233) and covered with a cloche.

Subtype 3 is represented by two symbolic graves: 80 and 120. They were built out of stone tiles and pebbles which created fortification. In both graves the presence of burnt human bones was not detected, but there was grave equipment. In the first case it was a knife and an iron pin and in the second one it were fragments of a vessel.

Type 7 is the most numerous type. It includes graves in a stone fortification. Three subtypes can be differentiated.

Subtype 1 includes pit graves in a stone fortification. Among them two variations can be distinguished. Variation a is characterized by the lack of clear grave pit outline. Burnt human bones as well as other elements were scattered between the stones creating fortification. It includes graves 3, 5, 109, 115 and 126. Variation b is made of pit graves with a clear pit outline. It includes graves 86, 90, 94 and 194.

Subtype 2 includes urn graves in a stone fortification. Variation a is made of graves put in the yellow sand layer. These are graves no. 1 with four urns and 34 which is a single grave. Variation b includes graves with crematory pile remnants. These are graves 59, 78 and 95.

The last subtype 3 is represented by symbolic grave 83. In its fill there were only fragments of a bowl.

Summing up the classification, it can be stated that 13 graves discovered on the cemetery in Kolonia Rychłocice had no stone constructions, among which 4 were pit graves and 9 urn graves. There

were 6 cloche graves, including 4 urn graves, 2 of which were in a stone fortification, 1 pit grave in a stone fortification and 1 symbolic grave. There were 11 box graves assigned, including 7 pit graves, 1 urn grave and 1 urn – cloche grave (!) and 2 symbolic graves. 17 graves were in a stone fortification, including 10 pit graves, 6 urn graves, 1 pit – urn grave and 1 symbolic grave.

In view of lack of good indicators, chronology of the cemetery was based on stylistic analysis of ceramics as well as grave forms. The oldest were the ceramic forms directly referring to Lusatian culture materials from Hallstatt period. It was identified in graves 1, 20, 34, 42, 48, 49, 59, 76, 79, 84, 106, 114, 120, 194, 221, 224 and 232. A great variety of burial ritual forms indicates that the cemetery in Kolonia Rychłocice site 1 was established during the period when there were influences of classical Pomeranian culture as well as cloche graves culture of Lusatian culture. It is probable that this big group of graves (17) presents the oldest horizon related to the cemetery's functioning, which can be associated with early La Tene period and probably with the early LTA and LTB.

Grave 221 is related to the finishing horizon of Pomeranian – cloche culture. It is an urn grave with no stone construction. A vessel of 1 e group was used as an urn, so far not found in materials from the Centre of Poland. However, these vessels, which are characterized by short, cylindrical neck with two symmetrically placed handles, oval body and flat bottom, are often found on the area of Mazowsze and Podlasie, and are associated with the end of the cloche grave culture. Similarly, the disappearance of cloche grave form is associated with this stage. Thus, it can be stated that the presented Pomeranian – Cloche Grave culture cemetery was used in wide time frame comprising early (probably its late phase) and middle La Tene period.

Przeworsk Culture cemetery (W. Siciński)

Przeworsk culture cemetery from Roman Influence period and early Migration period was completely studied. It included 176 graves with varied burial rituals. The biggest group, 131 graves, were

pit graves. Two types can be identified among them. The first type includes 35 clear pit graves, without burial pile remnants. The second type includes 96 graves in which remnants of the pile were put in the pits. Pit grave accessories were rather poor and were limited to mostly few fragments of pottery, or small, burnt metal objects and burnt human bones, sometimes also animal bones. The second group of graves includes urn graves, 45 burials, among which two types can be identified: clear, without pile remnants (16 graves) and with pile remnants (29 graves). Both aforementioned groups of pit and urn graves are typical for Pomeranian culture people from Roman Influence period. In case of eight urn graves regional differences are visible. The differences concern the manner of pile remnants placing. The urn, in which there were basic accessories, was covered with thick, tight layer of pitch black or grey pile remnants containing big amounts of charcoal, fragments of re-burnt pottery, small metal objects and small amount of tiny, burnt human and animal bones. Their arrangement suggests that these objects were put into an organic container, after having been picked up from the pile, and put on the top of the urn. Thus, they create a peculiar kind of urn grave sprinkled with pile remnants. Such form of urn graves was identified on a few neighbouring cemeteries in Siemiechów, Konopnica and Strobín located on the mid Warta River as well as in the farther located necropolis in Mierzyn-Grobla located in the Pilica River basin. The graves' accessories were usually very rich. They included attributes of both male and female burials. Their chronology is quite narrow and falls within phase B1b – B2b of early Roman Period.

Skeleton grave no. 38 deserves special attention. It was discovered in the south part of the cemetery in the surrounding of pit graves from early-late Roman Influence Period. Its characteristic feature was a big burial pit filled with stones. About 135cm deep a pit was identified. Its shape was similar to a rectangle in size ca. 180×54cm, filled with yellow sand with addition of grey humus. Even though, there were no bones in the pit, its size suggested that it was a skeleton grave.

Fragments of three vessels, including two turned on the wheel pieces, were found slightly above the pit's bottom.

Late ancient skeleton graves are rarely discovered in central Poland. No such burial had been discovered on the Warta River area. Few such graves can be found on the area of Bzura River basin, in Witów and Gozdów. All of them have similar directions N – S, similar size and depth. The accessories found in these graves allow them to be dated Migration Period (5th century). It seems that grave no. 38 should be associated with this group of skeleton graves.

Special attention should be also paid to two features discovered on the cemetery, which interpretation causes some problems. The first one was found in the east part of the Przeworsk culture cemetery, where an oval layer with burnt human bones was uncovered. Its size was about 60m² and 15cm deep. In its fill, which consisted mainly of grey-black, burnt humus, 1127 hand-made pottery items were discovered, including 152 fragments of re-burnt pottery, one small fragment of an imported terra sigillata vessel and 38 metal objects – tools (knives, flint, scissors, awl), ornaments, clothing elements (clasps, pendants, buckles), armor elements and equestrian equipment (handle, hanger from a sword scabbard, spurs) and other small metal objects as well as small amount of burnt human and animal bones, which weight 176g. Fragments of pottery made on wheel were not identified in this layer. On the edge of the layer and close to it, 6 crematory graves were found. Their chronology can be identified as phase B2 – C1a Roman Influence period. Other material found in the layer can be similarly dated. It seems that the presented feature complies with the criteria of *ustrina* (*ustrina* no. 1), that is the place where people were cremated. The degree of foundation burning as well as huge variety and repetitiveness of certain monuments and small amount of tiny burnt human and animal bones also complies with the criteria. Presence of bigger amount of both pottery and other object relics shows that in this place cremation was performed multiple times.

Within the described layer, a feature similar to rectangle was found. Its size was 440×270 cm and it was directed on N – S axis (damaged in the west part). Feature outline was indicated by 40 cm wide and 14–20 cm deep groove with concave fill. In the NE and SE feature corners post traces were found which depth was up to 40 cm. Its fill consisted of grey, sandy humus, in the holes there was dark grey humus with 243 fragments of hand built pottery, 13 fragments of wheel pottery as well as 4 tiny iron objects and burnt human bones. Interpretation of this feature causes many difficulties. The described feature is similar to groove type graves which are mostly found in Upper Silesia and northern part of Kraków – Częstochowa Upland. However, its construction and content does not meet the criteria of this type of features. The second possible interpretation of the feature identifies it as a foundation part of the pile strengthened in the corners with posts. This possibility was mentioned by B. Józefów (2008, p. 214) who claimed that some ustrinas were accompanied by post holes, which could be associated with construction strengthening elements. The third possibility is to recognize the groove feature as a small building relic with post construction, slightly hollow in the ground. However, it elicits the question about the function of the building on the cemetery. Can that be the trace of prefuneral building, where deceased were kept before the burial ceremony? This hypothesis is difficult to prove. Similar features are not known on Przeworsk culture cemeteries. More over more that the feature was covered with the layer of burning, which indicates the functional differences with another ustrina on the same area. Unless it has a slightly older chronology.

Material gathered during exploration of Przeworsk culture cemetery consists mostly of pottery. It is a collection of 136 whole vessels or preserved in bigger fragments enabling their reconstruction as well as a few thousand of shreds. In terms of technology the material can be divided into three basic groups. Group I, the most numerous, includes vessels and their hand made fragments. Based on vessels' morphology as well as their general proportions, 6 groups of vessels were identi-

fied: A – pots, B – vessels, C – mugs, D – goblets and bowls, E – basins, F – cups. The division complies with their functional differences. Among them a more detailed subdivision into types and variations was performed. Group II includes vessels made on the wheel. It is a small group consisting of 203 shreds of pottery. It was possible to partially reconstruct only two vessels. Group III includes imported pottery from the area of Roman Empire. The group consists of 168 fragments of terra sigillata vessels as well as small terracotta olive lamp. This monument was found in grave 112 in the cremation layer covering the urn. The lamp was harmed and was preserved in two parts. It was made in dual form from fine-grained clay, burnt light brown. There are numerous burning traces from the pile on its surface in a form of bubbles. As regards the lamp classification it belongs to the type with decorated disc. This type belongs to the most popular type appearing in different variations, especially in the 2nd century AD in Italy as well as in Roman provinces. Lamp in the shape of a pallet is a characteristic feature of Hellenistic and Roman lamps from the 1st century BC and the 1st century AD, appearing at the beginning of the 2nd century. Fan shape of the burner is another feature of lamps from the 1st – 2nd century AD. Even though olive lamps appear in collections of many museums in Poland, it is a rare occurrence for the lamp to appear on the territory of Przeworsk culture from the area of Roman Empire. So far, only one lamp has had archeological documentation found on the territory of Przeworsk culture cemetery in Lachmirowice, district of Inowrocław.

Among metal monuments, a big group possesses clear chronological features, such as: armament elements: sword, arrowheads, shield fittings – shield boss and handlers, spurs, ornaments and elements of clothing: clasps, bone pins, pendants, glass beads, miniature objects, buckles and belt ending fittings, tools as well as daily used objects: knives, scissors, spindle whorls, combs, flints, elements of chests. Special attention should be paid to the presence of fragments of at least seven vessels made of bronze and brass, imported from the area of Roman Empire, as well as rarely met in

Przeworsk culture elements of horse tack such as a curb, lash fittings with a cicada and bell shaped ornament.

Analysis of the graves filling allows to identify chronological frames of the cemetery's functioning. Unfortunately, very small amount of grave groups has chronological indicators allowing accurate dating with the precision to one chronological phase. The largest group includes graves which dating can be determined as Roman influence period due to the lack of clear stylistic features of pottery and metal chronology indicators. Since the cemetery was completely excavated and researched, presented division into different phases of its functioning can be treated as closed collections.

Cemetery's functioning begins with two graves: 113 with bronze clasps AIV type 1 and 2 according to T. Liana as well as grave 21A with bronze clasp AV series 7. Among metal objects there are arrowheads: type IV, variation 1 and type X. Pottery is represented by two groups of vessels: A, type 4 and B, type 2 and 3. This collection of monuments enables dating the cemetery's set up phase B2a of Roman Influence period.

The next phase B2b of Roman Influence period is marked as a fast development of the cemetery. Characteristic monuments from this phase include pottery: group A, type 2, 3a and 4, group B, type 1, 2 and 3, group C, type 4, group D, type 6b, group E, type 2a. Metal monuments include chronologically sensitive group IV clasps, type 2 and 3, group V iron clasps, type 7, 8, 9, 10 and 11 according to Almgren. This chronological phase includes graves 18, 21, 43, 61, 82, 97, 101, 102, 104, 105, 112 and 125.

Similar in terms of amount grave group can be placed in broadly defined phase B2 of Roman Influence period. It includes graves: 6, 22, 41, 44, 45, 50, 56, 60, 91, 132, 153 and 206. Ceramic material consists of pottery: group A, type 1a, 2, 5 and 7a, group B, type 1, group D, type 1, 2, 3, 4 and 6a, group E, type 2 and group F, type 1a. Metal monuments include fibulas group A V 120, series 11, group G, type 1 buckles, horn combs type A.I, sword type III series 4, arrowheads group I type 4

variant 4 and 2 as well as L type, umbo J7b, group C, type 1 spurs and type IA2a flint.

Two graves 57 and 62 can be dated in a slightly broader time intervals comprising phase B2b and B2/C1 of Roman Influence period. Typical ceramics includes group A vessels, type 2 and 6, fibulas A II 41, A IV type 3 and A V 148, group G buckle type 46, type B. I comb, type IX arrowhead and group E type 8b spur.

Five groups of graves can be placed in a relatively narrow time interval of B2/C1 phase. These are graves: 121, 137, 160, 166 and 220. Ceramics is represented here by group A type 1b and 5, group C, type 2 and 3, group D, type 3, 4 and 5 as well as group F, type 1b. Remaining monuments characteristic to this phase were made of copper alloy or copper and iron alloy. These include clasps A II 41 Y, A II 43 and A V, series 9 and group B. I combs.

Another big group of graves possesses transitional features of phase B2 decline and phase C1a of Early Roman Influence period. This phase is indicated by vessels from group A, type 2, 3a, 5 and 6, group B, type 1 and 3, group C, type 1, group D, type 1 and 2, group E, type 1b, 2 and 3b, as well as pottery fragments with hedgehog ornaments. Remaining monuments include type B. I combs, group G, type 1, 16 and 43 buckles, as well as group H, type 1 buckles, type VII, variation 1 and type XIV arrowheads. This group consists of graves: 27, 31, 33, 103, 124, 141, 146, 171, 183, 185, 196, 198, 203, 230, 231 and ustrina 1.

Grave 201 with fragments of type I comb and grave 195 with miniature objects are also dated phase B2/C1 - C2.

Clear time horizon among phase C1a is visible in graves 10, 30, 92, 111, 142, 156, 186, 187, 191, 219 and 229. Vessels of group A, type 2, group D, type 2, 3 and 4, group E, type 1a and 2b as well as fragments of terra sigillata vessel appear in these graves. Among metal objects characteristic are clasps A 158 with staggered sheath, iron clasp AVI/VII, umbo J7a, type XI, XXIII variation 1 and type H arrowheads, group III type 6 belt fitting and type A. I comb.

11 graves are dated Early Roman Influence period. These include graves: 14, 87, 89, 133, 134, 139,

140, 175, 211, 227 and 228. Ceramics is represented by group A, type 1, 3a and 3b, group C, type 2 and 4, group D, type 1, 3, 4 and 7, group F, type 2b vessels and fragments of terra sigillata vessels. Moreover, there were also clasps A 158 made of copper alloy and iron, type I combs as well as type IV, X, XII arrowheads and inlay arrowhead type III.

6 graves can be dated phase C1 – C2 of Early – Late Roman Influence period. These are graves: 7, 8, 13, 66, 69 and 70. Hand made vessels group D, type 8 appear in these graves, although fragments of pottery made on a wheel are more common. As regards other objects, fragments of type 1 combs are the most common.

Grave 70 should be dated in slightly broader time interval of phase C1b – C2. Inside there was a dome umbo with a nub and hand made vessels group A, type 3a, group B, type 1, group C, type 4 and group D, type 3.

Graves 24 and 37 are the only ones that can be placed in phase C2 of Late Roman Influence period. Metal monuments are represented by fragments of silver clasp group VI and harness filling with ornament in shape of cicada as well as umbo type J5 and dome umbo with dented collar inside.

Ustrina 2 was used at the end of Early Roman Influence period up to the beginning of Migration period.

Cemetery's usage ends with grave 38, probably a skeleton one. It can be dated early Migration period (phase D1).

The largest grave group consists of graves which do not possess clear chronological features. It includes 89 graves which are generally dated Roman Influence period. However, this group should be placed between the beginnings of phase B2a of Roman Influence period and the beginning of phase D of Early Migration period according to the cemetery's usage.

Terra sigillata pottery from Przeworsk culture cemetery (L. Tyszler)

Presented here terra sigillata comes from the exploration in Kolonia Rychłocice conducted in 2000–2001, 2003 and 2006–2007, 2009–2011 by M. Jądzewska and W. Siciński, during which 168

fragments were obtained. Preservation condition of the pottery is typical for cremation cemeteries of Przeworsk culture, that is flaked and mostly burnt.

Analysis of the terra sigillata shreds enabled identification of about 16–17 relief bowls, Dragen-dorff 37 type from huge pottery centres in Rheinzabern on the Rhine (six – seven), in Westerdorf (five) and Pfaffenhofen (five) on the Inn. Vessels from Rheinzabern were made by potters Comitalis VI, Julius I or Lupus, Primitivus I, in style of Primitivus I (?), Julius II – Julianus and Victor II – Januco (groups IIa, IIb, IIc, IIIa, IIIb according to Bernhard). Bowls from Westerdorf were made in a workshop of master Helenius (five bowl) and bowls from Pfaffenhofen were made in workshop of potters Helenius and Dicanus.

Identified in Kolonia Rychłocice terra sigillata bowls represent goods which came to south basin of the Warta river after Marcommanic Wars (after 180 AD). The youngest goods came to this region at the end of migration wave during the second third of 3rd century (until the half of the 3rd century).

Results of aerial archaeology in site 1 region in Kolonia Rychłocice (R. Brzejszczak, P. Papiernik)

Aerial archaeology in Kolonia Rychłocice was performed in three parts: at the turn of winter and spring, in the summer before harvest as well as early autumn. Maximum flight height was between 155 and 215 meters. Altogether 818 photos were taken and the area covered about 100 hectares around site 1 in Kolonia Rychłocice (fig. 143). The first flight around the cemetery in Kolonia Rychłocice took place on 27th March 2019. On the west of the site a few meters wide vegetative discriminant was observed which goes in the line north – south. Described feature is probably a trace of glacial drainage during the last ice age. Another soil discriminant was observed in the distance of 350 m east from the cemetery, in the neighbourhood of one of the farms (fig. 144). Dark grey filling as well as shape and size of the feature can indicate its anthropogenic character of unidentified chronology. Another flight in Kolonia Rychłocice took place

during the harvest on 19th July 2019. Numerous vegetative discriminants were observed on the area of the site. They are associated with a few connate streambeds (fig. 145). The pictures taken in the distance of 400 m east from the cemetery showed the course of field fortification from the Second World War in form of trenches (fig. 146). The trenches are associated with the war finishing period and German defence line Stellung-B1. The last flight around Kolonia Rychłocice took place on 24th September. No clear anomalies around the site were observed, however, in the distance of 500 m in south-east direction a few big dark grey soil discriminants were observed. Some of them can be remnants of archaeological features but the biggest anomaly can be a relic of cultural layer or a group of clay pits which are difficult to divide on the surface (fig. 147).

Anthropological analysis of human remnants from multicultural cemetery (A. Zielińska)

The study presents the results of anthropological analysis of human remnants from 229 graves discovered on a multicultural cemetery in Kolonia Rychłocice site 1, province of Łódź. The analysed remnants come from a skeleton grave of Mierzanowice culture, crematory grave of Lusatian culture, 43 crematory graves of Pomeranian – Cloche Grave culture, 176 crematory graves of Przeworsk culture and 8 graves of unidentified chronology. The anthropological analysis revealed that 262 people were buried in the graves.

The oldest discovered burial is the skeleton grave of Mierzanowice culture dated early Bronze Age (table 14). The burial was damaged by the later grave of Pomeranian culture. The skeleton was poorly preserved and fragmentary, the bones were eroded.

Next chronological episode appearing on cemetery in Kolonia Rychłocice site 1, is related to Lusatian culture population as well as pit grave dated IV period of Bronze Age (table 15). Poorly preserved human remnants as well as lack of diagnostic fragments considerably limited the pos-

sibility to determine the gender and age of the deceased.

There were 48 burials assigned on the Pomeranian – Cloche Grave part of the cemetery, most of which were single burials – 37 (77%), apart from that there were 9 double burials (19%) and 2 triple burials (4%) (fig. 148).

In 14 burials of Pomeranian culture the addition of burnt animal bones was observed (table 20).

The anthropological analysis of human remnants revealed that 61 people were buried on Pomeranian – Cloche Grave cemetery in Kolonia Rychłocice site 1, which probably does not reveal the actual state as the graves were not completely excavated due to their great dispersion.

Structure of age and gender of the deceased of Pomeranian – Cloche Grave culture was created on the basis of the individual remnant denomination (table 21, fig. 149). The age structure analysis revealed that the biggest percentage, close to the actual one, 44% were children aged 0 to 14 years. Children from younger age group (infans I) were the predominating group of 32,8%, in older age group (infans II) 11,5%. Another group were juveniles (iuvenis) constituting 6,5%. Among adults the biggest percentage was the age of adultus (16,45%). The smallest percentage (1,6%) was the age group of matures, there were no representatives of the oldest age group senilis.

Human remnants of Pomeranian-Cloche Grave culture in Kolonia Rychłocice site 1 had mainly non-specific indicators of physiological stress as well as degeneration and deformation changes within spine and limbs joints. Additionally, few examples of developmental and inflammation changes were identified.

The last and most numerous as regards archaeological materials phase of cemetery's functioning constitute people of Przeworsk culture from Roman influence period. Bone remnants came from 178 features, out of which 176 were graves, mainly pit graves, one of them was a grooved feature. In two cases the bone remnants came from the cremation layer (table 25).

Among 178 burials discovered on the Przeworsk culture part of the cemetery, the most nu-

merous were single burials – 166. Few double burials were also observed (12) (fig. 155).

In Przeworsk culture graves the addition of animal bone fragments was observed among the human bone remnants. The presence of burnt animal bones was noted in 91 features, that includes 89 burials and two cremation layers (table 28).

The anthropological analysis of human remnants revealed that 191 humans were buried on the Przeworsk culture part of the cemetery. Due to the fact that this part of the cemetery was fully excavated, it can be assumed that the deceased make up the majority of population using this cemetery. They do not constitute the whole population as the poor state of preservation of the human bone remnants and their incomplete state in some of the pit graves made it impossible to determine the exact number of the buried humans.

Female bones constituted 10,4% of the examined bone remnants, while male 7,9%. Humans of unidentified age and gender constituted the highest percentage 38,7% as well as adults of unidentified gender (29,8%). Analysis of age and gender structure revealed lower percentage of child burials from 0 to 14 years old – 12,6%, which is reflected in the real child life expectancy on Przeworsk culture part of the cemetery.

Human remnants of Przeworsk culture population had mainly degeneration, deformation and

overloading changes within spine and limbs joints as well as non-specific indicators of physiological stress. Additionally, examples of developmental and inflammation changes were identified.

8 pit graves of unidentified chronology were assigned on the multicultural cemetery in Kolonia Rychłocice site 1. Their cultural affiliation was not determined (table 33).

Conclusion (W. Siciński)

Presented cemetery contributes many new elements in the scope of knowledge about pre-historical settlements in the mid basin of the Warta River. Special attention should be paid to skeleton grave of Mierzanowice culture which is an evidence of penetration of this area by Mierzanowice culture people and at the same time is a rare example of this activity in the region. On the contrary, cemetery of Pomeranian – Cloche Grave culture, with varied burial ritual, shows that many cultural traits met here. Foundations of Lusatian culture with dominating elements of Pomeranian – Cloche Grave culture resulted in creation of culturally mixed model in Early and Middle La Tene period. Whereas, completely explored and researched and long-lasting Przeworsk culture cemetery shows settlement stability in Roman Influence period and people's connections with Roman Empire area.