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ENEOLITHIC GRAVE WITH SO-CALLED “MILK JUGS” FOUND IN ZAKRZOWIEC, SITE 7, LESSER POLAND

ABSTRACT

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In 2005, during rescue archaeological excavations preceding the building of the A-4 motorway, at Site no. 7 in Zakrzowiec, Wieliczka district, a feature interpreted as a grave of the Wyciąże-Złotniki group of the Lengyel-Polgár complex was discovered. The human skeleton was not preserved, but the grave furnishings consisted of two amphorae of the ‘milk jug’ type (German term: Milchtopf, Hungarian term: tejesköcsög). Vessels of this type belong to the basic taxonomic distinction of the Wyciąże-Złotniki group and are known from both graves and settlement sites. One of the vessels from the grave in Zakrzowiec has a unique decoration in the form of disc-shaped handles (German term: Scheibenhengels) and a circumferential zigzag pattern formed of short engraved lines. This is the first such decoration on “milk jug” type amphorae known from the Lesser Poland region.

Keywords: Eneolithic, milk jug, Milchtopf, Scheibenhengel, Lengyel-Polgár, Wyciąże-Złotniki group, burial
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INTRODUCTION

Large-scale rescue excavations along the construction route of the A-4 Kraków – Tarnów motorway produced many interesting and numerous discoveries for the Stone Age, connected mainly with the early Neolithic settlement of the Linear Pottery and Malice cultures. Less numerously represented were the Eneolithic units: the Funnel Beaker culture, the Lengyel and Polgár complex groups, the Baden culture, and the Corded Ware culture. Against this background, the traces of settlements found at several sites in the area of Podłęże and Zakrzowiec, Wieliczka district, related to the Wyciąże-Złotniki group of the Lengyel-Polgár complex, stand out. Most finds come from a large settlement at Site 17 in Podłęże, surrounded by a system of ditches and palisades (Dzięgielewska *et al.* 2006; Nowak *et al.* 2007; Nowak 2010). Meanwhile, a single grave and two utility pits were discovered at the neighbouring Site 7 in Zakrzowiec just to the south (Jarosz and Rodak 2006). The materials of the Wyciąże-Złotniki group found at these two sites together form a single settlement complex, consisting of a settlement and a funerary zone (grave or cemetery?) on its periphery (Fig. 1).

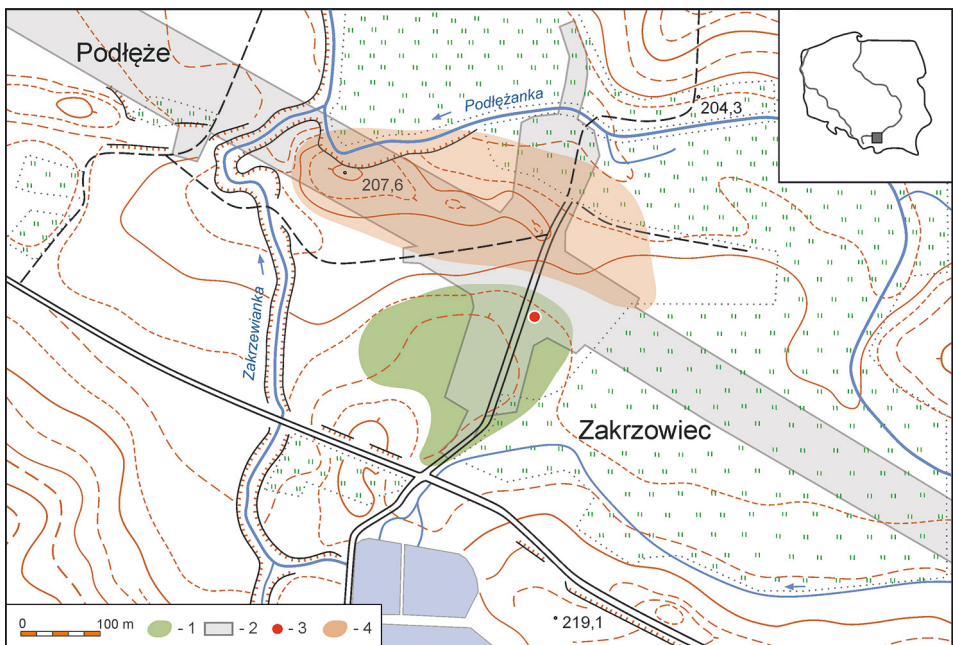


Fig. 1. Location of Site 7 in Zakrzowiec, Niepołomice commune, Wieliczka district: 1 – range of the archaeological site delineated on the basis of surface surveys, 2 – A-4 motorway, 3 – findspot of Grave 2128, 4 – extent of the Site 17 in Podłęże. Illustration by authors

The subject of this article is a single grave from Site 7 at Zakrzowiec, in which no human skeleton was preserved, and the grave goods consisted of two amphorae, the so-called ‘milk jugs’ (German term: Milchtopf, Hungarian term: tejesköcsög; on the function of vessels of this type see Craig *et al.* 2013). One of them has a unique decoration in the form of disc-shaped handles (Scheibenhenkels) and a circumferential zigzag pattern formed of short engraved lines (for a brief account of this find see Grabowska and Zastawny 2011, 127). This type of decoration on a ‘milk jug’ type amphora was previously unknown in the materials of the Wyciąże-Złotniki group.

SITE LOCATION AND RESEARCH HISTORY

The archaeological Site No. 7 in Zakrzowiec (Niepołomice commune, Wieliczka district, Lesser Poland voivodeship) is located within the Bochnia Foothills in the western part of the Sandomierz Basin. In geological terms, it is an undulating terrain, built of salt-bearing Miocene formations partly covered by Quaternary sediments, including loess (Kondracki 2011, 307; Solon *et al.* 2018). The Bochnia Foothills area is dominated by brown and rusty soils, while the river valleys are covered by muds (Richling and Ostaszewska 2009, 239, mapa 53.1). The site is located on a small elevation, sloping gently north-eastwards towards the Podłęzanka stream bed and westwards towards another watercourse called Zakrzewianka (Fig. 1). In the south, the site is bounded by village buildings.

Site 7 in Zakrzowiec (AZP 103-58/95) was discovered in 1996 during surface surveys related to the planned construction of the A4 motorway (survey by J. Górski, E. Trela and M. Zając). Archaeological excavations began in 2000 and continued intermittently until 2007. The work was directed by the Cracow Team for Archaeological Supervision of Motorway Construction (Krakowski Zespół do Badań Autostrad), and the work was carried out by several teams led by: W. Machowski, I. Mianowska, M. Nowak, I. Wójcik, B. Roczkalski, J. and T. Rodak, P. Staniucha and O. Sabat-Maj. A total of 253.92 ares of area were surveyed. The result of the works was the investigation of a large number of stratified context and the recovering of over 65,000 portable artefacts, mostly attributed to the Lusatian culture of the Bronze and Early Iron Ages. The Eneolithic assemblage is the next most numerous, followed by artefacts generally dated to the Stone Age, Pomeranian culture, the Mierzanowice culture, the Late Bronze Age and modern period, and those without a defined chronology. More than 1,800 features (mainly utility pits) have been identified, including 71 Eneolithic features representing several units: the Funnel Beaker culture, Wyciąże group, Wyciąże-Złotniki group, and the Lengyel-Polgár complex in general.

DESCRIPTION OF THE FINDS

In the northern part of the surveyed area, at 30 m from the boundary of the excavation trench, a feature (No. 2128) interpreted as a grave of the Wyciąże-Złotniki group was discovered and surveyed in 2005 (Fig. 2). The shallow burial pit (Fig. 3), measuring 220 × 110 cm and 22 cm deep, was almost rectangular in plan-view and had a hollow-shaped bottom outline in the vertical section (Fig. 3: 3). It was orientated on the N-S axis (Fig. 3: 1). The fill of the feature in question on the south side was partially destroyed by a small pit No. 3235 (Fig. 3), the cultural affiliation of which has not been established (it contained no material). Two layers were identified in the burial pit: a shallow bottom layer, formed by greyish-yellow earth (Layer 2677a), and a grey earth layer of uniform structure, which was the main part of the feature's fill (Layer 2677). In the latter layer, burial furnishings were discovered, consisting of two vessels, placed side by side in a horizontal position (on their side) in the central part of the pit (Figs 3 and 4). The vessels, composed of almost 300 sherds of various sizes, were almost completely reconstructed (Fig. 5). They were placed in the shallow hollow of the main fill layer (Fig. 3: 2, 3). No other archaeological material was recovered from the feature under discussion. There were no skeletal remains.

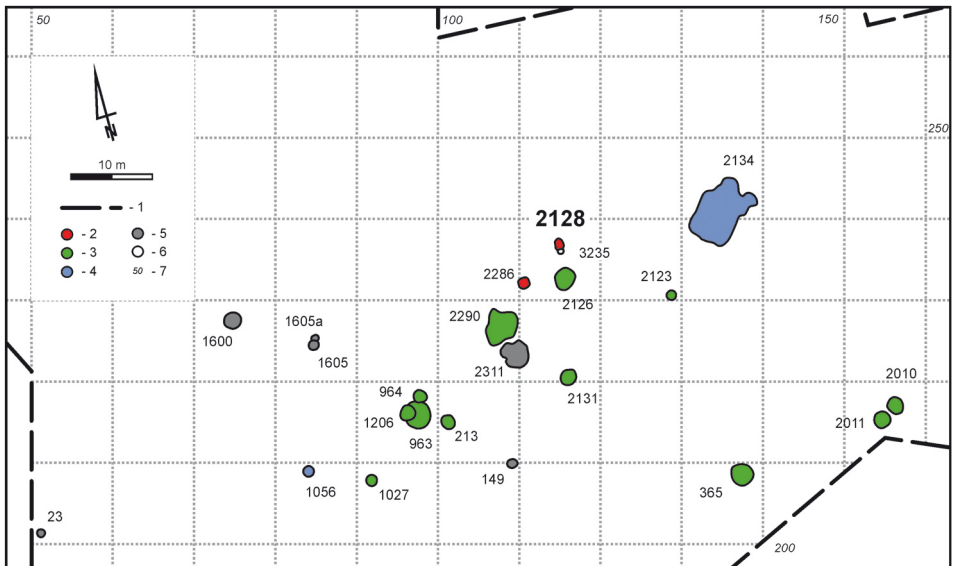


Fig. 2. Zakrzowiec, Site 7, Wieliczka district.

Plan with the distribution of archaeological features in the northern part of the excavated area: 1 – boundary of the excavated area, 2 – Wyciąże-Złotniki group, 3 – Wyciąże group, 4 – Lengyel-Polgár complex, 5 – Eneolithic, 6 – undetermined chronology, 7 – designation of the measuring grid.

Illustration by authors

Feature 2128

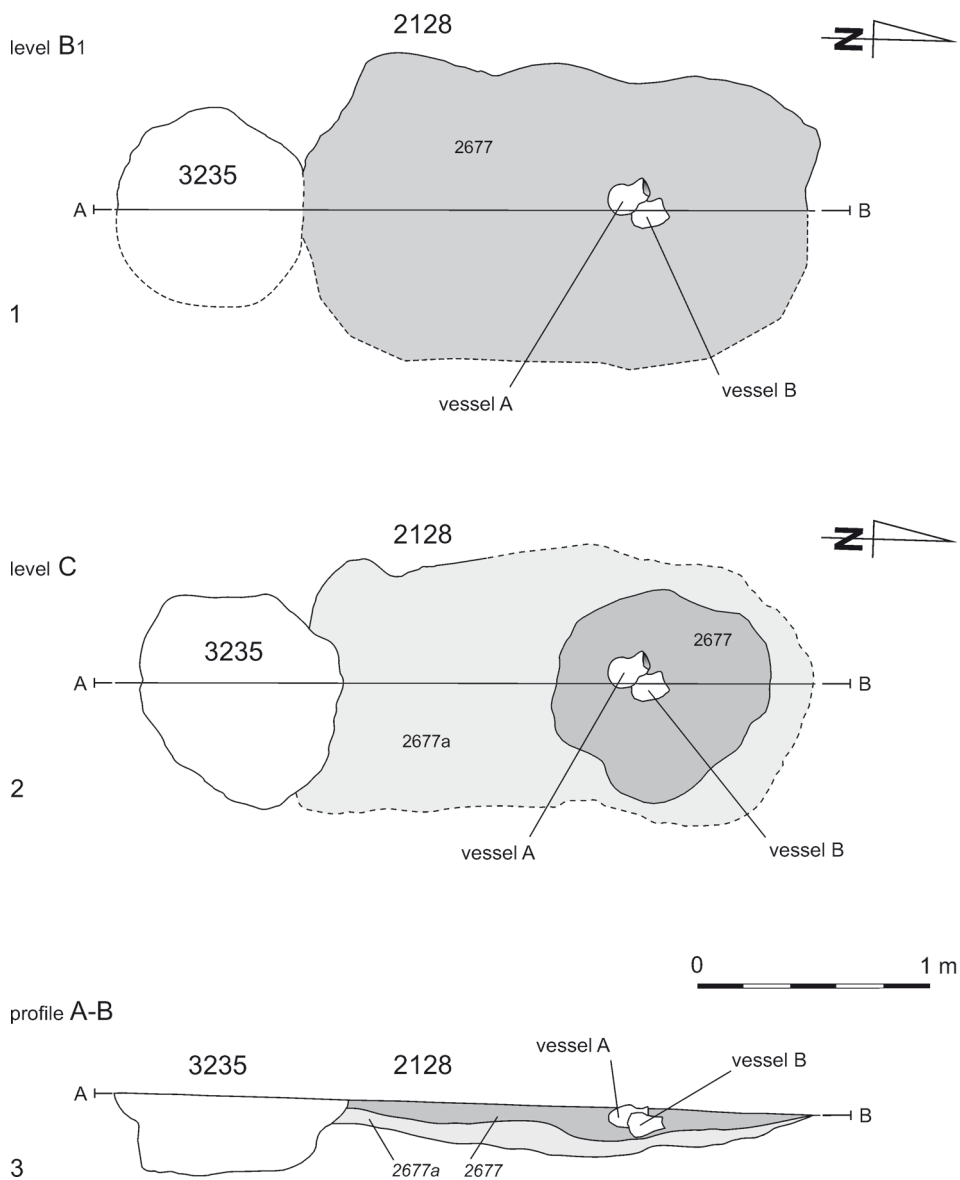


Fig. 3. Zakrzowiec, Site 7, Wieliczka district.
Plan views (1, 2) and cross section (3) of Grave 2128.
Illustration by authors

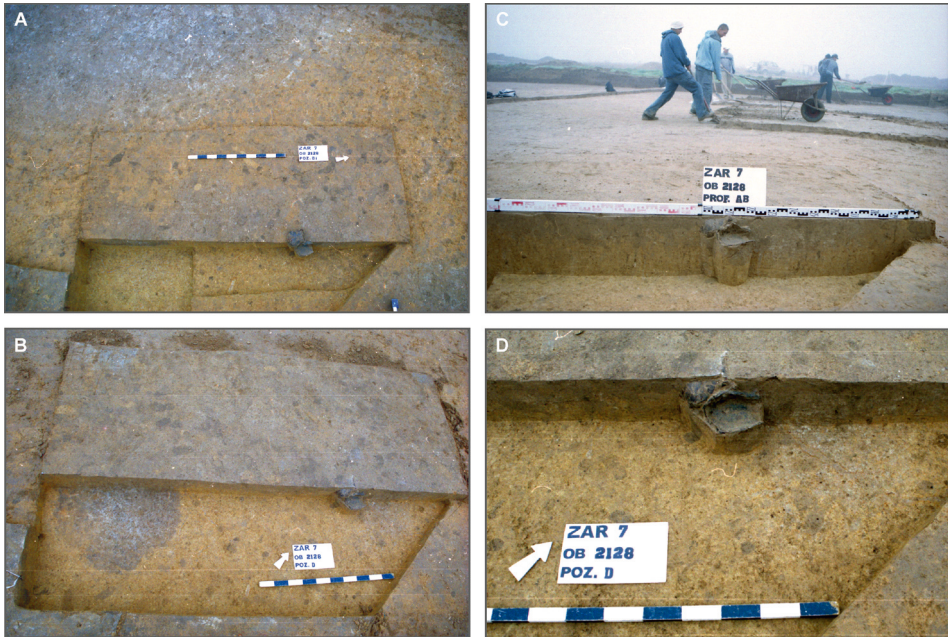


Fig. 4. Zakrzowiec, Site 7, Wieliczka district.
The view of Grave 2128 at different stages of excavation.
Photo by B. Roczkalski

Grave inventory

Vessel A

'Milk jug' type amphora, undecorated (Fig. 5: 2). A medium-sized, thin-walled vessel with a hemispherical belly and a high, arched neck, narrowing toward the rim and slightly everted lip. The boundary between the neck and the body is marked by a characteristic ledge in the form of a shallow groove and occurs exactly at the mid-height of the vessel. The vessel has two small handles protruding from the edge of the rim. The mouth of the vessel is not circular, but clearly oval. In the clay body, medium- to coarse-grained grog pellets are present, often with a diameter of more than 1 mm, fine-grained sand is also present in small amounts. The surface of the vessel is well finished and smooth. A thin layer of brick-beige colour is visible underneath the external brown slip layer, with a brown-black core of the vessel wall underneath. The vessel is well fired, but in many parts the external slip layer is peeling off.

Dimensions: height: 15.5 cm; diameter of the rim: 10.0-10.8 cm; diameter of the belly: 14.5 cm; diameter of the base: 5.0 cm, wall thickness: 0.5 cm.

Vessel B

Amphora of the 'milk jug' type with decoration (Fig. 5: 1; 6). A medium-sized, thin-walled vessel with a hemispherical belly and a high, conical tapering neck. The edge of the mouth, at which the two small handles are placed, is thickened and slightly everted. The neck is separated from the belly by a characteristic ledge in the form of a shallow groove and occurs exactly at the mid-height of the vessel. The mouth has a circular outline, while the base is oval. Both handles were formed in the Scheibenhenkel style, which means that



Fig. 5. Zakrzowiec, Site 7, Wieliczka district. 'Milk jug' type amphora from Grave 2128:
1 – vessel B, 2 – vessel A. Illustration by authors



Fig. 6. Zakrzowiec, Site 7, Wieliczka district. "milk jug" type amphora (vessel B) with decorative details.
Photo by A. Susut

an ellipsoid disc was applied to the attachment of the handle (see Fig. 5: 1 and 6). On the neck below the rim of the vessel is a 2 cm high horizontal zigzag pattern formed by short engraved lines (Fig. 5: 1; 6). This decoration occurs around the neck. The surface of the vessel is well finished and smooth. As in the case of vessel A, a thin brick-beige coloured layer is visible underneath the external brown coloured slip, with a brown core of vessel wall underneath. The vessel is well-fired, but the external slip layer is peeling off at the rim and the handles (Fig. 6). Medium to coarse-grained grog pieces are noticeable, and fine-grained sand is also present in small quantities. The clay body is well formed and non-staining.

Dimensions: height: 16.2 cm; diameter of the rim: 8.7 cm; diameter of the belly: 14.8 cm; diameter of the base: 5.2-5.8 cm, wall thickness: 0.5 cm.

DISCUSSION

Grave form

Despite the lack of skeletal remains in Feature 2128, its burial function is attested by several other features, most notably the structure of the feature and the uncovering of two whole (crushed) vessels lying side by side in the centre of the pit (Fig. 4). The burial pit, near-rectangular in plan-view and hollow-shaped in cross-section, was filled with earth forming two layers of identical texture and a slight difference in colour (Figs 3 and 4). This indicates that the pit in which the deceased and grave goods were deposited was backfilled once. The absence of skeletons in grave features (soil acidification) is a typical feature of Neolithic and Eneolithic burials discovered in the Wieliczka-Bochnia region south of the Vistula Valley, as well as in other neighbouring areas. The sepulchral character is confirmed in such cases precisely by the structures of the features, the type of fills, the presence of grave offerings and, in exceptional cases, the staining of the soil indicating that the deceased were interred in a crouched position (Czerniak *et al.* 2006; Grabowska and Zastawny 2014). Examples are the graves of the Linear Pottery culture from Brzezcie 17 (Czekaj-Zastawny *et al.* 2009, 191-193), Targowisko 12, 13 (Czerniak 2013, 48, 49) and Łoniowa 18 (Valde-Nowak 2013, 100), the graves of the Malice culture from Targowisko 10, 11 (Grabowska and Zastawny 2014, 263-264) and Targowisko 12, 13 (Czerniak *et al.* 2006, 542, 543), as well as graves of the Wyciaże-Złotniki group from Modlniczka 2 (Czekaj-Zastawny and Przybyła 2012, 182-185) and Zagórze 2 (Kadrow *et al.* 2020, 14, 15).

The closest analogy to the Zakrzowiec grave discussed here is the aforementioned feature from Site 2 in Zagórze, Wieliczka district (Kadrow *et al.* 2020, 14-15, fig. 53). This feature (No. 494) is twice as small (110 × 60 cm), but has an identical rectangular outline, orientation on a near N-S axis, consistent fill, and no traces of a skeleton. The grave goods consisted of a copper axe. The second feature with very similar characteristics is the burial

from Site 2 in Modlniczka, where an oval pit without a skeleton was oriented on the NW-SE axis and three vessels were placed in its northern part (Czekaj-Zastawny and Przybyła 2012, fig. 58: 1, 59). The oval or near-rectangular shape of the grave pits also characterises other burials of the Wyciąże-Złotniki group, discovered in two major funeral sites in Kraków Wyciąże 5 and Igołomia 1 (Kozłowski 1971, fig. 1; Kaczanowska 2009, 77). However, the orientation of the graves with skeletons in the cultural group in question differs, although arrangements on the N-S axis and with deviations from this axis prevail here, as in Zakrzowiec (Kaczanowska 2009, 77). This orientation of the burial pits is also typical of the Lublin-Volhynian culture (Zakościelna 2010, 65, 66). In the grave from Zakrzowiec, two 'milk jug' type amphorae were placed in the central part of the pit, closer to its northern edge. A similar arrangement of ceramic grave goods was found in the cemetery in Kraków Wyciąże 5, where skeletons arranged with their heads to the N and NE were accompanied by vessels placed near the skull and chest in the northern and central parts of the grave pit (Kozłowski 1971, fig. 1, tables II, III; Kaczanowska 2009, 79). The location of vessels at the NW edge of the pit was also recorded in the grave from Modlniczka 2 (Czekaj-Zastawny and Przybyła 2012, fig. 58: 1). Based on the above analogies, we can presume that Feature 2128 originally contained a human skeleton placed in a crouched position on its side, with the head to the N. Given the considerable size of the grave pit, it cannot be ruled out that this may have been a double burial. An example of probably such a burial is Grave 4-5 at Kraków-Wyciąże 5, in which three vessels were found, including an amphora of the 'milk jug' type (Kozłowski 1971, 69).

The grave discovered at Zakrzowiec therefore fits the general characteristics of the construction of the grave pits and the location of the grave inventory in the Wyciąże-Złotniki group. However, the rules of burying the dead were not uniform in this group (Kaczanowska 2009, 76-79). The lack of a preserved skeleton is a disadvantage in interpreting the find discussed here, as well as similar ones, which should be referred to as assumed burials.

The comparison of the features of the Zakrzowiec burial site should also be referred to the funerary ritual elements of the Eneolithic groups from outside the Lesser Poland region, especially the late Bodrogeresztúr and Hunyadihalom-Lažňany cultures from the Carpathian Basin (see Nevizánsky 1984; Häusler 1994; Lichter 2001; Šuteková 2005), with which the Wyciąże-Złotniki group shows the most correlations (Kozłowski 1971, 95; 1989, 196; Kaczanowska 2009, 86; Nowak 2010, 80). The shape of the burial pit from Zakrzowiec (close to rectangular) finds good analogies in the cemeteries of the Bodrogeresztúr culture, where a regularly rectangular outline of graves prevails, with the presence also of oval-shaped graves, *e.g.*, at Tiszapolgár-Basatanya (Bognár-Kutzián 1963, suppl. 2) and Tiszavalk-Kenderföld (Patay 1978, Abb. 2). This shape of grave pits is not surprising, as it is prevalent in the early Eneolithic cultures of southern Poland (see Zakościelna 2010; Wilk 2016; Mozgala-Swacha and Murzyński 2017). The untypically large dimensions of the feature from Zakrzowiec (220 × 100 cm) also have parallels in the aforementioned cemeteries (*e.g.*, Grave 123 at Tiszapolgár-Basatanya; Bognár-Kutzián

1963, 203 and Grave 29 at Tiszavalk-Kenderföld; Patay 1978, 21). In contrast, the orientation of the longer axis of the burial pits is different, with a dominance of the W-E axis in the Bodrogkeresztúr culture cemeteries (*e.g.*, Tiszavalk-Kenderföld; Patay 1978, Abb. 2, Szihalom-Sóhajtó; Szabó 1997, fig. 44) and Hunyadihalom-Lažňany (Šebastovce; Šiška 1972, 145). The location of grave goods, in particular ‘milk jugs’, is interesting. The set of pottery, usually placed near the head and chest of the deceased, generally includes one ‘milk jug’ (Bognár-Kutzián 1963, figs 109, 120, 131). Pairs of vessels of this type, *i.e.*, as at Zakrzowiec, are rarely encountered. Burials with two ‘milk jugs’ placed side by side are known (Tiszavalk-Kenderföld, Graves 48 and 51; Patay 1978, 29-31), as well as with three ‘milk jugs’ (Tiszapolgár-Basatanya, Grave 111; Bognár-Kutzián 1963, plate 104: 3, 5, 7). These vessels were placed at the head of the deceased (Tiszavalk-Kenderföld, Grave 48; Patay 1978, Abb. 45; single ‘milk jug’ in Urziceni-Vada Ret, Grave 39; Chmielewski *et al.* 2021, fig. 3), as well as next to the head and legs (Tiszapolgár-Basatanya, Grave 111; Bognár-Kutzián 1963, fig. 105). The discovery of two ‘milk jugs’ in a grave from Zakrzowiec therefore deserves to be highlighted. This is the first such case so far in the Wyciąże-Złotniki group in Lesser Poland, where burials equipped with only one such vessel have previously been known, *e.g.*, in Kraków Wyciąże 5 – Graves 4-5, 13, Igołomia 1 – Grave I (Kaczanowska 2009, 80).

Pottery

‘Milk jugs’ in the Wyciąże-Złotniki group

The vessels discovered in Zakrzowiec represent the so-called ‘milk jug’ type of amphorae. According to the authors of the article, they are thin-walled vessels of medium size, with a globular body, a conical neck tapering upwards and two small handles under the rim, symmetrically placed (Fig. 7). A characteristic morphological feature is the ledge in the form of a shallow horizontal groove that separates the belly from the neck and falls about in the mid-height of the vessel. The above definition corresponds to the characterisation of amphorae with handles in the type of ‘milk jugs’ by J.K. Kozłowski and J. Kamieńska (Kozłowski 1971, 76; Kamieńska and Kozłowski 1990, 80) and differs from the definition proposed by M. Kaczanowska and later by M. Nowak, who include in the group of ‘milk jugs’ (or more precisely, the amphorae-like vessels in the ‘milk jug’ type) both forms with and without handles (Kaczanowska 2009, 80; Nowak 2014, 253, 254). The ‘milk jugs’ known from the Lesser Poland area are deduced from the Bodrogkeresztúr culture (Kozłowski 1971, 76-78), in which the vessels described as ‘milk jugs’ are forms that vary in shape and proportion, but, originally, always with a pair of handles on the necks (Bognár-Kutzián 1963, 276; Patay 1975, 20, 21; 1976, 251; 1978, 49). Forms considered to be classic ‘milk jugs’ from the Carpathian Basin area are those with a slender neck, the height of which is clearly greater than that of the globular belly, with two handles on the neck (Bognár-Kutzián 1963, pl. 134: F1 2a, 92: 1, 103: 8; 109: 2; Patay 1978, Taf. 3: 9, 4: 6,

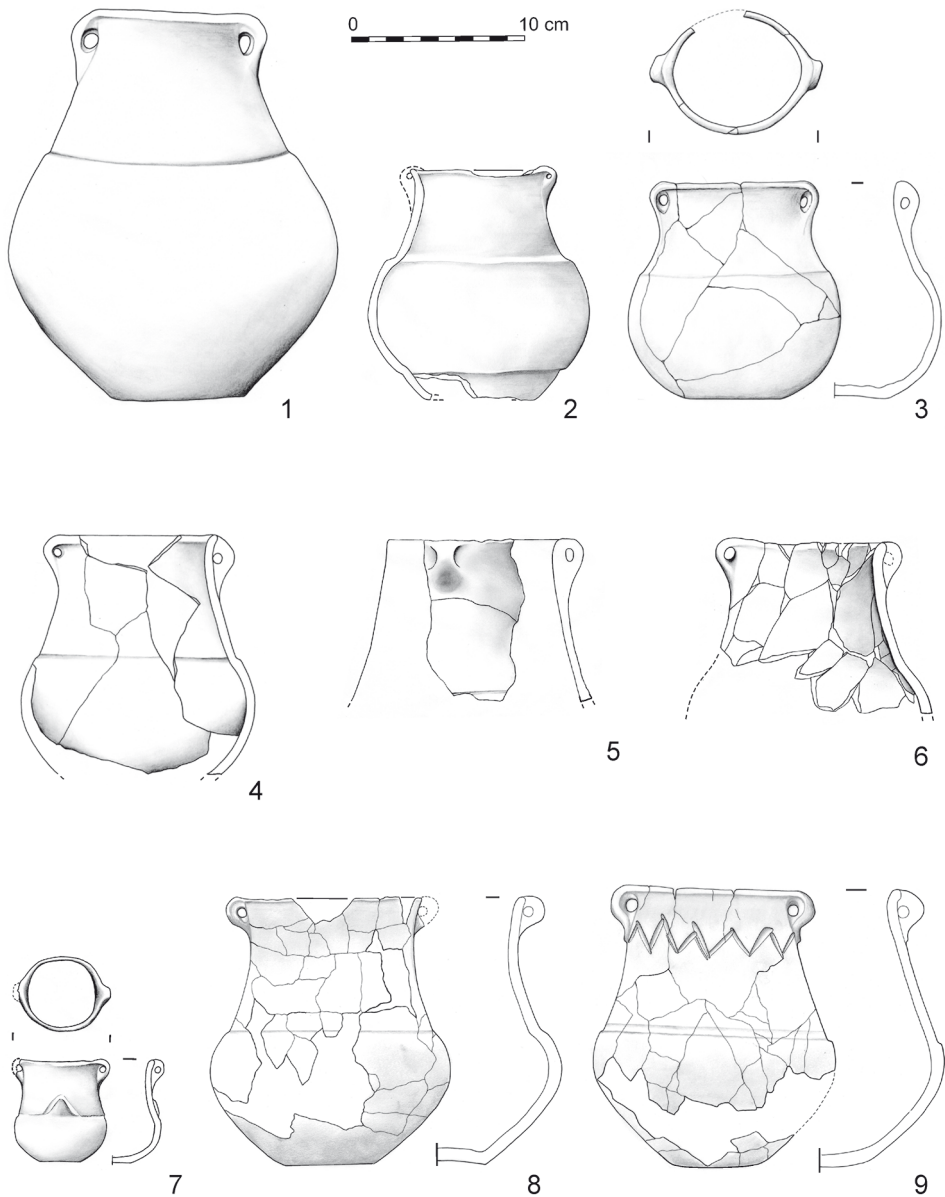


Fig. 7. Amphorae of the "milk jug" type in the Wyciąże-Złotniki group in Lesser Poland: 1 – Kraków Wyciąże Site 5, Grave 4-5 (Kozłowski 1971); 2 – Wawrzeńczyce Site 41, assumed grave (collection of the Archaeological Museum in Kraków); 3 – Kraków Krzesławice Site 68, assumed grave (unpublished); 4 – Złotniki Site 1, settlement (Dzieduszycka-Machnikowa 1966); 5 – Kraków Krzesławice Site 41, settlement (Kaczanowska 1988), 6 – Targowisko Site 16, settlement (Włodarczyk 2004); 7 – Kraków Wyciąże site 5, grave no 13 /47/ (Kozłowski 1971); 8, 9 – Zakrzewiec Site 7, Grave 2128.

Illustration by authors

10: 8; Szabó 1997, 45, 176). Undecorated forms predominate, but there are also vessels with plastic decoration (mainly knobs, but also bands) and very richly ornamented (Bognár-Kutzián 1963, pl. 1: 1, 6; 6: 3, 4; 17: 5; Patay 1960; 1975, 21; Taf. 7, 8, 16: 1; 1976, 2. t. 2, 5; 9. t. 6; 1978, 49; 2008, fig. 1: 1, 5, 7, 8; fig. 2: 3; Virag 2013, 184).

Milk jugs belong to the basic taxonomic distinguishing features of the Wyciąże-Złotniki group in Lesser Poland (Dzieduszycka-Machnikowa 1966; 1969; Kozłowski 1968; 1971; 1986; 1989; 2006; Kamińska and Kozłowski 1990) and are known from both settlement and grave sites (Figs 7 and 8), including two sites that are eponymic for this group: the cemetery in Kraków Wyciąże 5 (Kozłowski 1971) and the settlement in Złotniki 1 (Dzieduszycka-Machnikowa 1966). Entirely or almost entirely preserved 'milk jugs' (at least 11 vessels from eight sites) come from settlement pits from Złotniki 1 (one vessel; Dzieduszycka-Machnikowa 1966, fig. 6: a), Kraków Krzesławice 41 (two vessels; Kaczanowska 1988, pl. 1: 26, 27), Targowisko 16 (one vessel; Włodarczyk 2004, fig. 12: 1), from graves in Kraków Wyciąże 5 (two vessels; Kozłowski 1971, tabl. 2. 4, Kaczanowska and Tunia 2009, figs 78 and 86), Igołomia 1 (one vessel; Kozłowski 1971, ryc. 2; Kaczanowska and Tunia 2009, fig. 71), Zakrzowiec 7 (two vessels; in this article) and assumed graves in Kraków Krzesławice 68 (one vessel; unpublished, collection of the Archaeological Museum in Kraków) and Wawrzeńczyce 41 (one vessel; Nosek 1937; collection of the Archaeological Museum in Kraków). Fragments of the discussed vessels (mainly lugs and upper parts of the neck) are known from further sites of the Wyciąże-Złotniki group, such as Chełm 1 (Zastawny and Brzeska-Zastawna 2018, fig. 4: 5), Brzezcie 36 (Olejarczyk and Tynieć-Kępińska 2006, ryc. 2: D), Modlnica 5 (Grabowska and Zastawny 2011, ryc. 25: B), Zakrzów 8 (Fraś and Pawlikowski 2015, ryc. 2: h), Kraków Bieżanów 8 (Zastawny 2014, 46; Kafińska 2012, fig. 14: d), Kraków Pleszów 17-20 (Kulczycka-Leciejewiczowa 1969, pl. 39: 4), Pobiednik 1 (collection of the Archaeological Museum in Kraków), Złotniki 1 (Dzieduszycka-Machnikowa 1966), as well as from settlement pits from the already mentioned sites with burials: Kraków Wyciąże 5 (Kozłowski 1968, 78) and Igołomia 1 (collections of the Institute of Archaeology and Ethnology of the Polish Academy of Sciences).

In addition to the inventories of the Wyciąże-Złotniki group, 'milk jugs' or forms similar to them are known from the Lublin-Volhynian culture assemblages (Gródek 1C; Za-kościelna 2010, pl. 13: 3; 14a: 6), from Lower Silesia, from the graves of the Jordanów culture (Mozgała-Swacha and Murzyński 2017, 56, tabl. 47: 5) and from the famous find from Janówek (Czarniak 2012, ryc. 44a), which is interpreted as a burial of the Bodrogeresztúr culture (Nowothnig 1939; Patay 1961; Kamińska and Kozłowski 1970).

Vessel form and decoration

Both 'milk jugs' from Zakrzowiec have almost identical dimensions and proportions (Fig. 5), but differ in the decoration, which only one of the vessels has (vessel B; Fig. 6). In terms of shape and proportions, the vessels from Zakrzowiec are distinguished from other 'milk jugs' in the Wyciąże-Złotniki group by a relatively high neck, the height of which cor-

responds to exactly mid-height of the whole vessel, which is marked by a characteristic ledge (Fig. 7). Except for the miniature ‘milk jug’ from Kraków Wyciąże 5 (Fig. 7: 7), all other specimens (preserved whole) have shorter necks, *i.e.*, shorter than the height of the belly (Fig. 7: 1-3). This feature causes them to be generally squat vessels, making them similar to Ludanice culture ‘milk jugs’, considered evidence of contact with the Bodrogkeresztúr environment (Virág 2002, 99, figs 11, 12; Szilas and Virág 2017, 37, 41). In the Polish literature, the accepted opinion is that they differ from the ‘classical’ or ‘original milk jugs’ of the Bodrogkeresztúr, for which slender forms were considered (Dzieduszycka-Machnikowa 1966, 24; Kaczanowska 2009, 80; Nowak 2014, 254). However, it is worth noting that among the Bodrogkeresztúr ‘milk jugs’ there are very diverse forms. Among them, one can point out the common low ‘milk jugs’, with shorter necks of more squat proportions (*e.g.*, Bognár-Kutzián 1963, pl. 91: 3; 100: 3; 104: 3; Patay 1950, 25. t. 2; Patay 1961, 1.t. 17, 4. t.6, 9. t. 1, 21. t. 8; Patay 1978, 1. t. 3, 10. t. 8, 13. t. 5), to which the vessels of the Wyciąże-Złotniki group relate. The ‘milk jugs’ from Zakrzowiec are close to the F1 2b and 2c types according to the division of I. Bognár-Kutzián for the Tiszapolgár-Basatanya cemetery (Bognár-Kutzián 1963, pl. 134, 135, 103: 4, 104: 3, 106: 8), as well as forms from other sites, *e.g.*, Tiszasas-Kelem (Patay 1975, Taf. 8: 7) and Tiszavalk-Kenderföld (Patay 1978, Taf. 1: 2, 4: 8). The ledge, separating the neck from the belly, characteristic of the Wyciąże-Złotniki group, is also noted, although rarely, on ‘milk jugs’ of the Bodrogkeresztúr culture (Patay 1978, Taf. 6: 7; Virag 2013, pl. 6: 4).

The most important distinctive feature of the ‘milk jugs’ from Zakrzowiec is the decoration of one of them with plastic and engraved ornamentation, in the form of Scheibenhenkels and a circumferential zigzag (Fig. 5: 1; 6). The presence of these two types of decoration on one vessel and, at the same time, the presence of disc-shaped handles on a ‘milk jug’ find no analogy so far. From the inventories of the Wyciąże-Złotniki group, only one ‘milk jug’ with an ornament is known thus far, the already mentioned miniature vessel from Grave 13(47) from Kraków Wyciąże 5 (Kozłowski 1971, tab. 4), decorated with a plastic triangle, modelled from the wall, whose base coincides with the line of the ledge, separating the neck from the belly. For greater convexity, the upper arms of the triangle were edged with grooves (Fig. 7: 7).

The Scheibenhenkels on the ‘milk jug’ from Zakrzowiec are horizontally pierced handles emerging from the rim and ending at the neck with small, oval (elliptical) discs (Fig. 6). Handles of this type, differing in size and shape of discs, are known in western Lesser Poland from several sites with assemblages associated with different Eneolithic units (Fig. 8). In the Wyciąże-Złotniki group alone, they are known from Kraków Mogiła 55 (two handles on bowls; Kaczanowska 1986, figs 4 and 5), Modlniczka 2 (two handles on a bowl and vessel of indeterminate type; Czekał-Zastawny and Przybyła 2012, fig. 53: 2, 3), Podłęże 17 (three fragments from vessels of undetermined type; Nowak 2010, fig. 13) and Zakrzowiec 7 discussed here (one vessel with handles from a grave and one handle from a settlement pit/unpublished/). From Site 5 in Modlnica come two vessels with discoid attachments

under the handles (a pot and an amphora), associated with the so-called Modlnica type assemblages with pottery of mixed Funnel Beaker culture/Baalberge, Furchenstichkeramik, Epi-Lengyel traits (Zastawny and Grabowska 2011, fig. 11: 2). Several small fragments of Scheibenhenkels from vessels of unspecified types are known from the Funnel

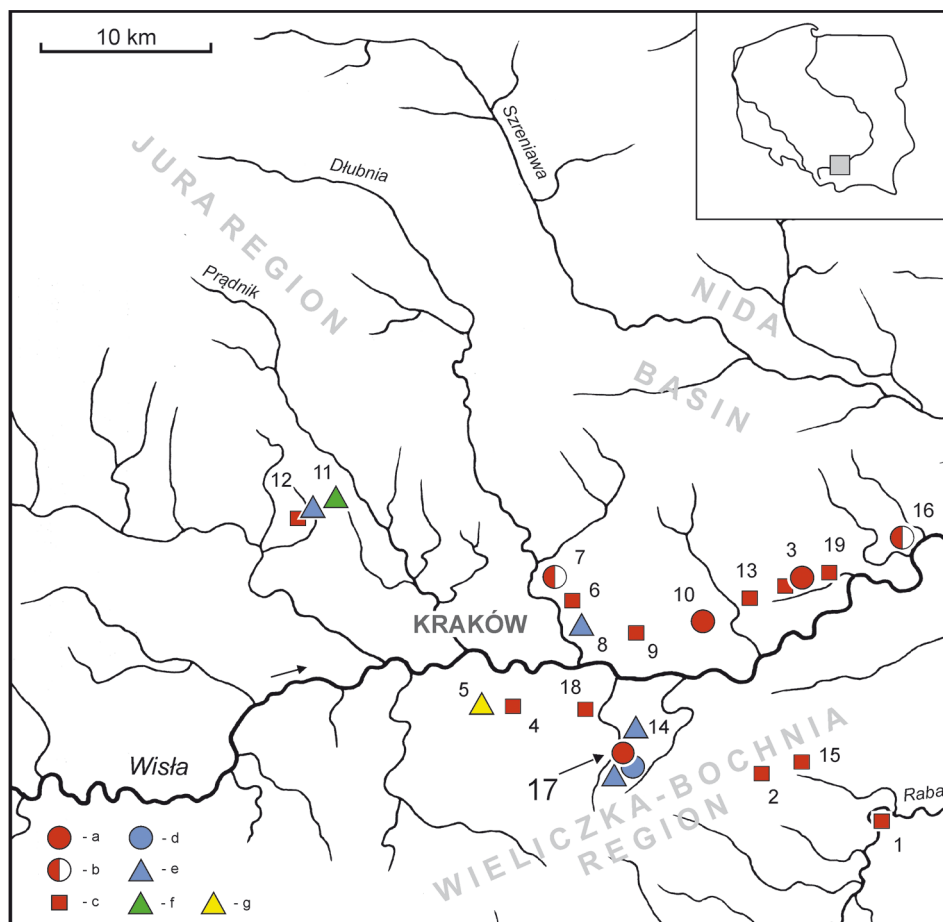


Fig. 8. Finds of vessels of the 'milk jug' type and vessels with *Scheibenhenkels* in Eneolithic assemblages in the Kraków region: a – 'milk jugs' from graves of the Wyciąże-Złotniki group, b – 'milk jugs' from probable graves of the Wyciąże-Złotniki group, c – 'milk jugs' from settlement sites of the Wyciąże-Złotniki group, d – *Scheibenhenkels* from grave of the Wyciąże-Złotniki group, e – *Scheibenhenkels* from settlement sites of the Wyciąże-Złotniki group, f – *Scheibenhenkels* from settlement site with assemblages of the Modlnica type, g – *Scheibenhenkels* from settlement sites of the Funnel Beaker culture

Sites: 1 – Brzezie Site 36, 2 – Chełm Site 1, 3 – Igołomia Site 1, 4 – Kraków Bieżanów Site 8, 5 – Kraków Bieżanów Site 30, 6 – Kraków Krzesławice Site 41, 7 – Kraków Krzesławice Site 68, 8 – Kraków Mogiła Site 53,55, 9 – Kraków Pleszów Site 17-20, 10 – Kraków Wyciąże Site 5, 11 – Modlnica Site 5, 12 – Modlniczka Site 2, 13 – Pobiednik Wielki Site 1, 14 – Podłęże Site 17, 15 – Targowisko Site 16, 16 – Wawrzeńczyce Site 41, 17 – **Zakrzowiec Site 7**, 18 – Zakrzów Site 8, 19 – Złotniki Site 1. Illustration by authors

Beaker culture settlement of Kraków Bieżanów 30 from the same horizon as the Modlnica type assemblages (Zastawny and Grabowska 2017, fig. 7; Zastawny 2018, fig. 2). From the Lublin-Volhynian culture cemetery in Książnice 2, a fully preserved vessel with handles of the type in question is known (Wilk 2016, figs 5 and 7). Almost all the above-mentioned fragments of vessels with Scheibenhenkels come from settlement pits. The exceptions are the vessel from the grave in Książnice 2 and the amphora from Zakrzówiec discussed here, which is the first 'milk jug' with Scheibenhenkels in Poland. Disc-shaped applications below the handles on vessels other than 'milk jugs' are also known from the Upper Silesian area (Kietrz-Łęgi, Racibórz Studzienna; Chmielewski 2014, figs 4 and 5). The occurrence of vessels with Scheibenhenkels (or Hunyadihalom) has a wide chronological and spatial range in central Europe, although the Middle Copper Age groups in the eastern part of the Carpathian Basin, the late Bodrogkeresztúr culture and above all the Hunyadihalom-Lažňany culture are considered to be the starting point for this style (Bognár-Kutzián 1969; Raczky 1991; Šiška 1972, 139; Patay 2005; 2008, 23; László and Sztáncsuj 2013). These handles are found in the Epi-Lengyel, Baalberg and 'transitional' units, characteristic of the end of the Lengyel-Polgár complex and the Funnel Beaker culture (see Ruttkay 1988; 1997; Raczky 1991; Koštuřik 2007; Zastawny and Grabowska 2011; 2017; Chmielewski 2014; Šmíd and Kalábková 2015; Šmíd 2017). This horizon actually closes with the appearance of the Boleráz culture (which we can synchronise more or less with the beginning of the 'classic' Funnel Beaker culture boom in Lesser Poland). As far as 'milk jug' forms with Scheibenhenkels are concerned, only two such vessels are known to the authors of this article: from Grave 133 in Tiszapolgár-Basatanya (Bognár-Kutzián 1963, 213, 277, 112: 14) and from Szabolcs (Patay 1950, 113, 32: 2). Both of these vessels have handles placed below the edge of the rim and are associated with the late Bodrogkeresztúr culture.

The decoration in the form of grooves arranged in a horizontal zigzag at the level of the attachments of the Scheibenhenkels is the second type of ornament on 'milk jugs' from Zakrzówiec (Fig. 5: 1; 6). This ornament has so far no analogue in the ornamentation of the pottery of the Wyciąże-Złotniki group. A similar motif in the form of a zigzag, located on the maximum protrusion of the belly (made in the Furchenstich technique in the opinion of P. Roman 1973, 72), can be indicated on a vessel of the Bodrogkeresztúr culture in the form of a vessel from Unirea, Romania (Vlassa 1964, fig. 2: 5, 359). Zigzag arrangements, however, mostly made with a different technology (plastic bands) have been recorded on vessels of the Hunyadihalom-Lažňany culture (Šiška 1972, abb. 29: 5). The most similar motif to the zigzag from Zakrzówiec occurred on a single quadrilateral goblet from Tiszaluc (Patay 2005, 83, Taf. 21: 16). Engraved motifs also occur in various arrangements in the Jordanów culture (*e.g.*, Mozgała-Swacha and Murzyński 2017, pl. 12: 1). The ornament of the horizontal zigzag made by the engraving technique is therefore an exceptional motif in the development horizon of the Wyciąże-Złotniki group and chronologically similar groups of the Carpathian Basin. Instead, it evokes associations with vessel decoration in slightly

younger units: the "classic" Funnel Beaker culture (*e.g.*, on a vase from Bronocice, where it symbolises water; Milisauskas *et al.* 2016) and the Boleráz and Baden cultures (*e.g.*, on wagon models and many vessel types; *e.g.*, Bondár and Raczky 2009; Farkaš 2010; Burmeister 2011).

CHRONOLOGICAL AND TERRITORIAL CONTEXT OF THE FINDS

It was not possible to obtain material for radiocarbon dating from the burial feature from Zakrzowiec 7. Both amphorae in the 'milk jug' type are interesting material for analysis in the scope of relative chronology, however. The typological form of both vessels reliably links them to the group of Wyciąże-Złotniki of the Lengyel-Polgár complex in western Lesser Poland. A 'milk jug' decorated with disc-shaped handles and a horizontal zigzag pattern arranged with grooves has no direct analogy in the cultural units of the Eneolithic of Central Europe. As previously written, two 'milk jugs' with Scheibhenkels (without additional ornamentation) are known in the Bodrogkeresztúr culture, from Tiszapolgár-Basatanya (Bognár-Kutzián 1963, pl. 112: 14) and from Szabolcs (Patay 1950, pl. 32: 2). The location of the 'milk jug' in the Tiszapolgár-Basatanya cemetery is particularly interesting. It was discovered in Grave 133, belonging to the southeastern cluster of burials (D cluster; Patay 2008, 44), linked to the late Bodrogkeresztúr culture and at the same time the latest phase of the cemetery's use (Bognár-Kutzián 1963, 277; Patay 2008, abb. 7; Raczky and Siklósi 2013, 566, fig. 2). At least some of the assemblages from cluster D in the Tiszapolgár-Basatanya cemetery (Patay 2008, 44, fig. 7), to which Grave 133 with the 'milk jug' with Scheibhenkels belongs, represent elements typical of the end of the Middle Copper Age, characteristic of the Hunyadihalom-Lažňany horizon. The time of development of the latter is placed within the period c. 4000/3900-3800 BC (Brummack and Diaconescu 2014).

The development of the Wyciąże-Złotniki group is placed in the broad time frame of 4300-3800/3750 BC (Nowak 2014, 250) or between 4250-4050 and 3650-3550 BC (Nowak 2017, 262, fig. 22). As already indicated, the pottery from Zakrzowiec has features corresponding to the late B2 stage of the Bodrogkeresztúr culture and can, according to the findings of absolute chronology in the Carpathian Basin, be more closely associated probably with the very late phase of this unit, the transition period to the Hunyadihalom culture (4050-3950 BC according to Chmielewski 2019, 29, 31). Synchronicity with a slightly younger episode corresponding to the latter phenomenon also cannot be ruled out (4000/3950-3800/3750 BC; Brummack and Diaconescu 2014, 252; Chmielewski 2019, 29). These proposals are supported by the suggestion of M. Nowak (2010, 82-85) regarding the dating of the settlement of the Wyciąże-Złotniki group in Podłęże 17.

As mentioned previously, in addition to Grave 2128 discussed here, only two more settlement pits associated with the Wyciąże-Złotniki group have been discovered at Site 7 in

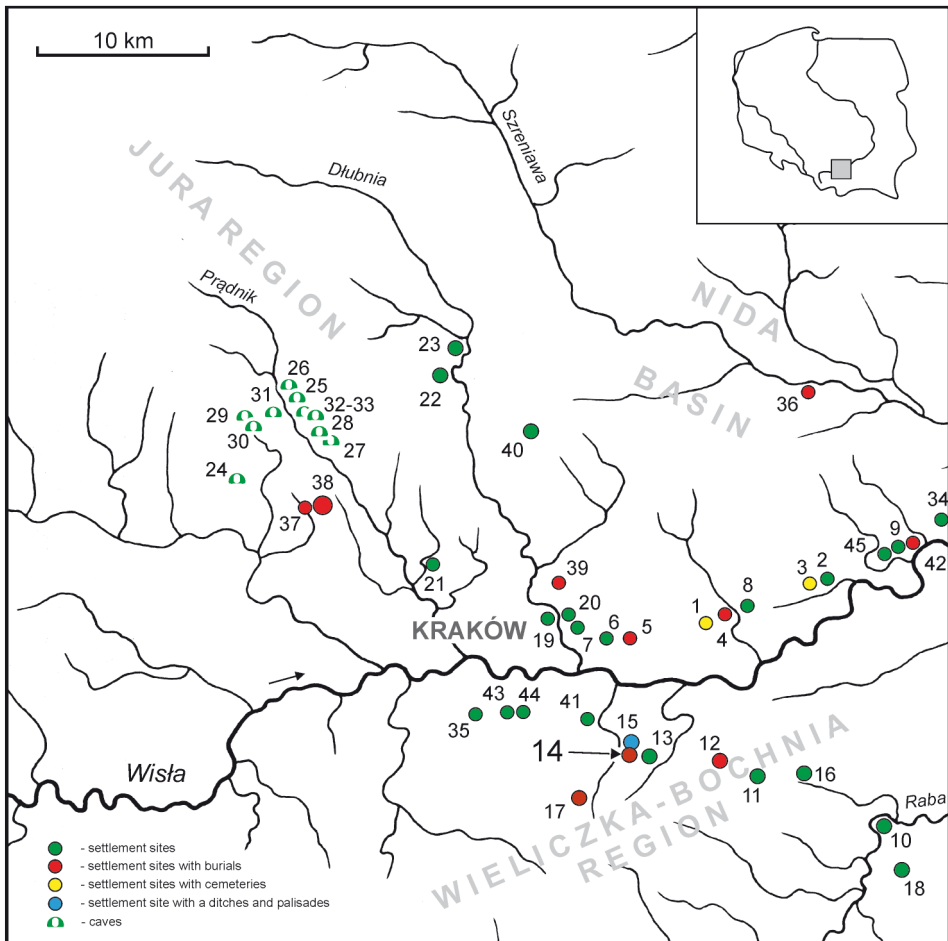


Fig. 9. Sites of the Wyciąże-Złotniki group of the Lengyel-Polgár complex in the Kraków region (Grabowska and Zastawny 2011, supplemented; Nowak and Tunia 2021)

Sites: 1 – Kraków Wyciąże Site 5, 2 – Złotniki Site 1, 3 – Igotomia Site 1, 4 – Kraków Cło Site 7, 5 – Kraków Pleszów Site 17, 6 – Kraków Mogiła Site 62, 7 – Kraków Mogiła Site 53,55, 8 – Pobiednik Wlk., Site 1, 9 – Wawrzeńczyce Site 37-40, 10 – Chelm Site 1, 11 – Brzezine Site 36, 12 – Zagórze Site 2, 13 – Zakrzowiec Site 6, 14 – **Zakrzowiec Site 7**, 15 – Podłęża Site 17, 16 – Targowisko Site 16, 17 – Bodzanów Site 1, 18 Moszczenica Site?, 19 – Kraków Bieńczyce Site 12, 20 – Kraków Krzesławice Site 41, 21 – Kraków Witkowice Site II, 22 – Damice Site 10, 23 – Iwanowice Dworskie Site 1 (Babia Góra I, II), 24 – Bolechowice Site 1 (Bezimienna Cave), 25 – Ojców (Oborzysko Małe Cave), 26 – Ojców Site 18 (Ciemna, Oborzysko Wielkie Cave), 27 – Maszyce Site 12 (Górna w Ogroju Cave), 28 – Ojców Site 14 (Główna w Kopcowej Górze Cave), 29 – Wierzchowice Site 2 (Wierzchowska Górna Cave), 30 – Wierzchowice Site 1 (Mamutowa Cave), 31 – Biały Kościół Site? (Nad Dziurawcem Cave), 32 – Ojców Site 2 (Główna w Okopach Cave), 33 – Ojców Site 3 (W Okopach Wielka Dolna Cave), 34 – Nowe Brzesko Site 24, 35 – Kraków Kurdwanów Site 8, 36 – Proszowice Site 24, 37 – Modlniczka Site 2, 38 – Modlnica Site 5, 39 – Kraków Krzesławice Site 68, 40 – Pielgrzymowice Site 9, 41 – Zakrzów Site 8, 42 – Wawrzeńczyce Site 41, 43 – Kraków Bieżanów Site 8, 44 – Kraków Bieżanów 15, 45 – Wawrzeńczyce Site 32, 33, 35.

Illustration by authors

Zakrzowiec. One of them (Feature 2286) is located in the immediate vicinity of the grave (Fig. 2), while the other (Feature 510), is located in the southern zone of the study area and more than 100 m away from Features 2128 and 2286. The close distance (approx. 150 m) that separates Zakrzowiec from the large settlement of the Wyciąże-Złotniki group from Site 17 in Podłęże (Nowak 2010) makes it possible to merge the two sites into a single settlement complex (Fig. 1), consisting of a settlement and a funerary zone (grave or cemetery?) located on its periphery. Zakrzowiec and Podłęże belong to a larger cluster of traces of prehistoric settlement associated with the right-bank part of the Vistula basin near Kraków, known as the Wieliczka-Bochnia region. More than a dozen sites of the Wyciąże-Złotniki group originate from here, marking the southern limit of the range of the entire settlement of this cultural group (more than 40 sites), with the centre on the left bank of the Vistula east of the centre of Kraków (Fig. 9). Currently, 29 graves of the Wyciąże-Złotniki group are known in the Lesser Poland region (*cf.*, Kaczanowska 2009, 75, 76; Grabowska and Zastawny 2011, 118, fig. 35). Eighteen inhumation burials come from two cemeteries accompanying the settlements (13 graves in Kraków Wyciąże 5; five graves in Igołomia 1). The others include three single skeletal burials (Kraków Pleszów 17-20, Kraków Cło 7, Proszowice 24), four graves in which no skeletons were preserved (Zakrzowiec 7, Zagórze 2, Modlnica 5, Modlniczka 2) and four probable graves (Bodzanów 1, Kraków Krzesławice 68, Wawrzeńczyce 41, Konieczmosty 1).

SUMMARY

Investigations at two neighbouring archaeological sites, no. 7 in Zakrzowiec and no. 17 in Podłęże resulted in the discovery of interesting settlement relics of the Wyciąże-Złotniki group of the Lengyel-Polgár complex. The large settlement in Podłęże, partly fortified, and the single grave and two settlement pits from Zakrzowiec probably constituted a spatially and chronologically coherent settlement complex. The grave from Zakrzowiec, located on the periphery of the settlement zone, may have been part of a larger cluster of graves located outside the surveyed zone. In the grave discussed in the article, human remains were not preserved, and the equipment consisted of two 'milk jugs', one of which has a unique decoration in the form of Scheibenhenkels and a circumferential zigzag pattern formed of short, engraved lines. This is the first such decoration on 'milk jug' type amphorae known from the Lesser Poland region. The decorative features of this vessel make it possible to connect the time of the grave's creation with the period corresponding to the late Bodrogeresztúr culture (stage B2), with pottery decorated, among other things, with *Scheibenhenkels*, *i.e.*, to the period of the turn of the 5th and 4th millennium BC and the beginning of the 4th millennium BC.

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