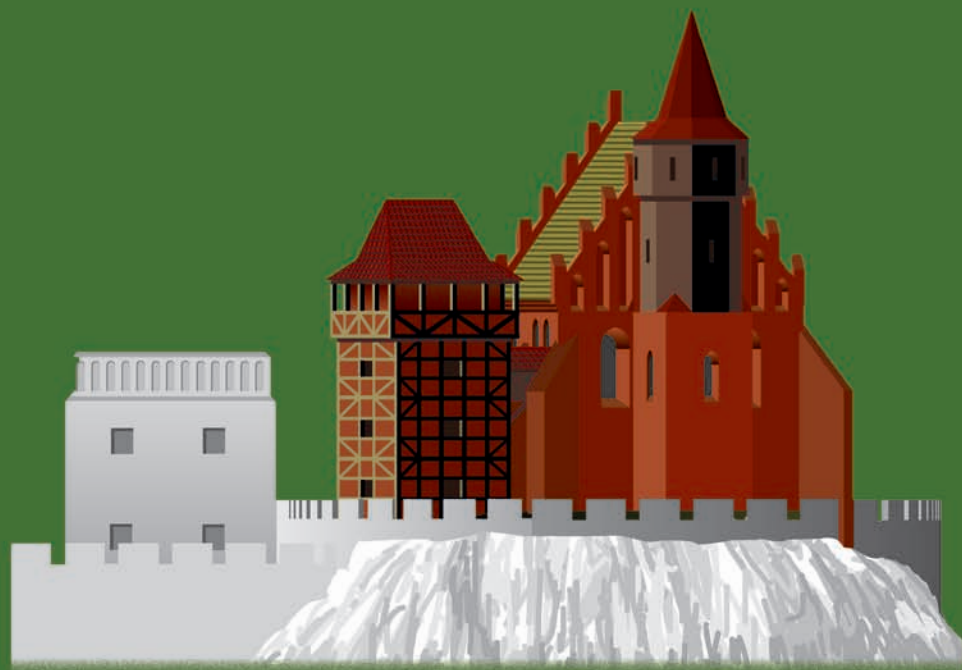


L'INSTITUT D'ARCHEOLOGIE
DE L'UNIVERSITE JAGIELLONNE
DE CRACOVIE

RECHERCHES ARCHEOLOGIQUES

NOUVELLE SERIE 2



KRAKÓW 2010

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DE L'UNIVERSITE JAGELLONNE DE CRACOVIE**

**RECHERCHES ARCHEOLOGIQUES
NOUVELLE SERIE 2**

KRAKÓW 2010

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L'Eglise StMichel et le monastère paulinien à Cracovie dans le début du XVIIe siècle
(la reconstruction par J. Poleski)

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Anna Lasota

Hand-made storage vessels from the Early Roman Period from south-western Lesser Poland

In the Early Roman Period, apart from the Przeworsk culture settlement covering southern Lesser Poland, there also occur single settlements attributed to the Púchov culture. This latter cultural unit was distinguished based on ceramic materials from the sites located on the Vistula River right bank. The Púchov culture settlement covered the territories extending from the right-bank Vistula in the Kraków region to the Wieliczka Foothills and Mogilany region (Garb Mogiłański) in the south (Madyda-Legutko, *et al.* 2005, 308). Ceramic materials of both above-mentioned cultures contain small percentage of large-size forms used for storing supplies.

The term “storage vessels” occurring in archaeological literature is applied most often to describe large, thick-walled forms more than 30 cm high (Godłowski 1977, 137; Droberjar 1997, 29; Rodzińska-Nowak 2006, 146). Such vessels, wheel-thrown, were widely used in the La Tène culture (Woźniak 2000, 301–307; Poleska 2006, 162). However, they appear in the Przeworsk culture’s inventory as well, where they came to be used on a large scale during the Late Roman Period (Dobrzańska 1990, part II, 45–46, 80–81; Wilk 2005, 361–363; Rodzińska-Nowak 2005, 268). On the other hand, hand-made storage vessels were

considered almost totally absent from the Przeworsk culture area in the Early Roman Period (Godłowski 1977, 137; Rodzińska-Nowak 2006, 149–150). Their presence, in the discussed period, on the territory of western Ukraine and Slovakia is interpreted as the influence of currents originating in the Dacian culture environment on the local pottery manufacture (Śmiszko 1939–1948; Godłowski 1977, 185). However, the analysis of the southern Lesser Poland region revealed a quite frequent appearance of whole forms and fragments of vessels corresponding to the description presented above. They differ from other pot-like forms in manufacture technology, morphologic details as well as in the limited degree of applied decoration.

The Early Roman Period vessels and their fragments discovered on the Vistula right bank in the Kraków region are connected with the Púchov culture settlement. They also occur further to the east, on the territories occupied by the Przeworsk culture (Fig. 1), though foreign cultural influences are noticeable there as well (Szpunar, Okoński 2004, 484–485). On the territories in question, fully preserved forms are accompanied by specimens preserved in fragments. They appear in the largest numbers on settlements at Wieliczka, site XI, and Tarnowiec, site 1.

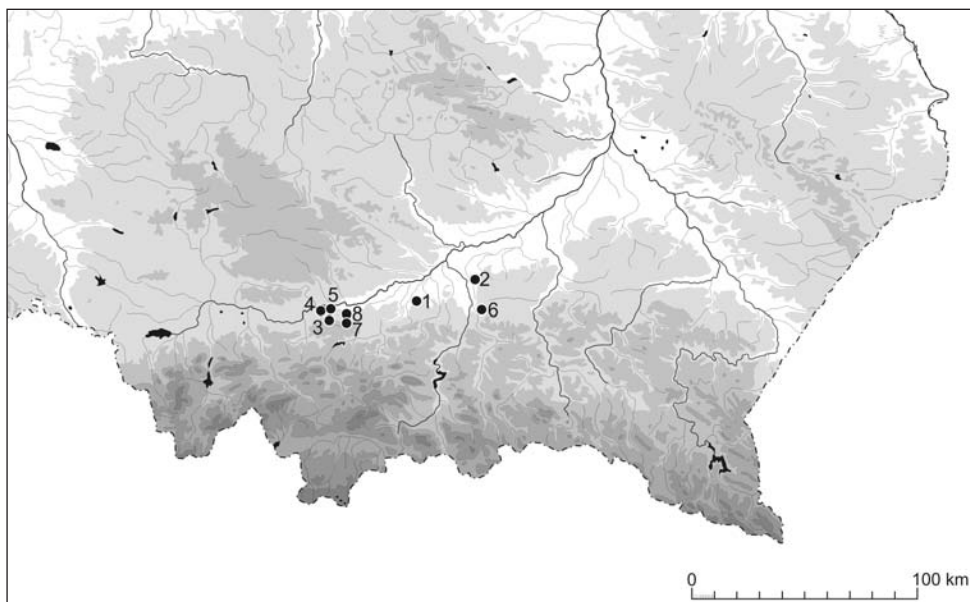


Fig. 1. Findings of storage vessels located in southern Lesser Poland: 1 – Bessów site 3; 2 – Gorzyce site 3; 3 – Kraków-Kurdwanów; 4 – Kraków-Pychowice; 5 – Kraków-Wola Duchacka; 6 – Tarnowiec site 1; 7 – Wieliczka site II; 8 – Wieliczka site XI

An important factor conditioning the correct classification of fragmentarily preserved vessels is the observation of their technological features. It should be noticed that pottery, especially hand-made, reveals significant regional diversity and forms various circles of a given type's distribution. Ethnoarchaeological literature describes this phenomenon as "technological dialects" (Vossen, 1971, 109; Horváth 2004, 343). It has been also stressed many times that the analysis of technological diversity is particularly useful in attempts to reconstruct the cultural model of archaeological societies (e.g. Martineau 2003, 209–210).

The analysis of the fully preserved specimens from the area in question not only allowed for the determination of morphological details, but also enabled the investigation of the technique applied during their manufacture. The outcomes were used during the

classification of the extensive collection of vessels preserved in fragments.

Hand-made storage vessels from southern Lesser Poland are made of pottery mass characterized by inaccurate amalgamation with temper grains. This is particularly visible in wall sections, which are layered or lumpy. The temper was most often a medium- and coarse-grained chamotte, less frequently also fine-grained chamotte. Fine stones with rounded edges were also customarily used, while crushed stone and sand were less common. In some extreme cases, temper grains reached 10 mm (Kraków-Kurdwanów, Wieliczka, site XI).

Vessels were not very carefully made. The majority of them have asymmetric bodies and irregular profiles. Walls thickness is also unequal within a single vessel. They are most often thick-walled forms, with mean wall thickness amounting to ca. 15 mm.

In extreme cases, walls are more than 20 mm thick (e.g. a fragment of a vessel from the settlement in Wieliczka, site XI, from feature 1/79). Surfaces usually reveal no traces of any additional smoothening, or smoothening was very limited, as manifested by irregular, horizontal or slightly oblique scratches. Treatment aimed at evening or smoothening of the outer surface was often applied to specimens known from the settlement at Pychowice, site 2. At Wieliczka, site XI, also the inner surfaces of some specimens were slightly smoothened. However, these traits were not to be observed in forms from Kraków-Kurdwanów. Surface colours vary from light-yellow, through beige and brown, to dark-grey and blackish, often spotted/mottled. Walls cross-sections are one-, two-, and sporadically three-coloured.

The studies on the morphological differentiation of storage vessels were based on 8 hand-made, fully preserved specimens coming from assemblages or settlements dated to the Early Roman Period (Fig. 2)¹. They are known from the following sites: Bessów, Bochnia district, site 3 (Okoński *et al.* 2000, Plate 15: a), Gorzyce, Tarnów district, site 3 (Szpunar, Szpunar 1991, Plate 8: a), Tarnowiec, Tarnowiec district, site 1 (Szpunar, Okoński 2004, Plate 8: a, 9: a), Kraków-Kurdwanów (Krauss 1957, 95), Kraków-Pychowice (Jamka 1961, 118), Wieliczka, Wieliczka district, site II (Folwarczyn-Miśko, Jodłowski 1977, 69), Wieliczka, site XI (Reguła 1979). Moreover, from Kraków-Wola Duchacka comes a preserved nether half of a storage vessel (Fitzke 1932, 58). All specimens represent slender forms, somewhat rounded, only exceptionally having a

strongly rounded body (Bessów, site 3). In respect of height they can be divided into medium-size vessels (31–45 cm), including vessels from Tarnowiec site 1 and Gorzyce site 3, and large vessels (50–100 cm), also known from Tarnowiec, site 1; Bessów, site 3; Kraków-Pychowice; Kraków-Kurdwanów; Kraków-Wola Duchacka; Wieliczka, sites II, XI². The maximal rim diameter ranges from 25 cm (Tarnowiec, site 1) to 47 cm (Wieliczka, site XI). Body diameters are always larger than rim diameters, while the latter are usually larger than base diameters. Only in two cases were the base diameters larger than rim diameters (Wieliczka, site II: rim diameter 32.5 cm, base diameter 38 cm; Pychowice: rim diameter 27.5 cm, base diameter 31.5 cm). Such proportions make these forms look squattier.

Thus, the height of the vessels in question is larger than the maximum body diameter. Rim diameters are almost twice smaller than heights and usually larger than base diameters.

Moreover, the discussed vessels are characterized in most cases by the presence of knob-handles which are usually placed mid-height or below the maximum body diameter. This trait enables the classification of even small fragments. Specific distinguishing marks of the discussed forms are also the rims. Based on their shape, they can be divided into two groups, that is S-shaped rims and forms imitating the flange-formed

¹ The analysis was only based on published and partially available unpublished materials from the collections of the Archeological Museum in Kraków, the Salt Mine Museum in Wieliczka and the Regional Museum in Tarnów.

² From Wieliczka, site XI come another three examples of fully reconstructed storage vessels, their height reaching 1 m. These specimens were unavailable for more detailed investigation at the moment of writing this paper as they were part of the archeological exhibition in Wieliczka Salt Mine. Moreover, the collection of the Salt Mine Museum in Wieliczka comprises a significant number of sherds, which can be undoubtedly connected with the vessel form in question. That indicates a significant percentage of these specimens in the pottery assemblage from the settlement on site XI in Wieliczka.

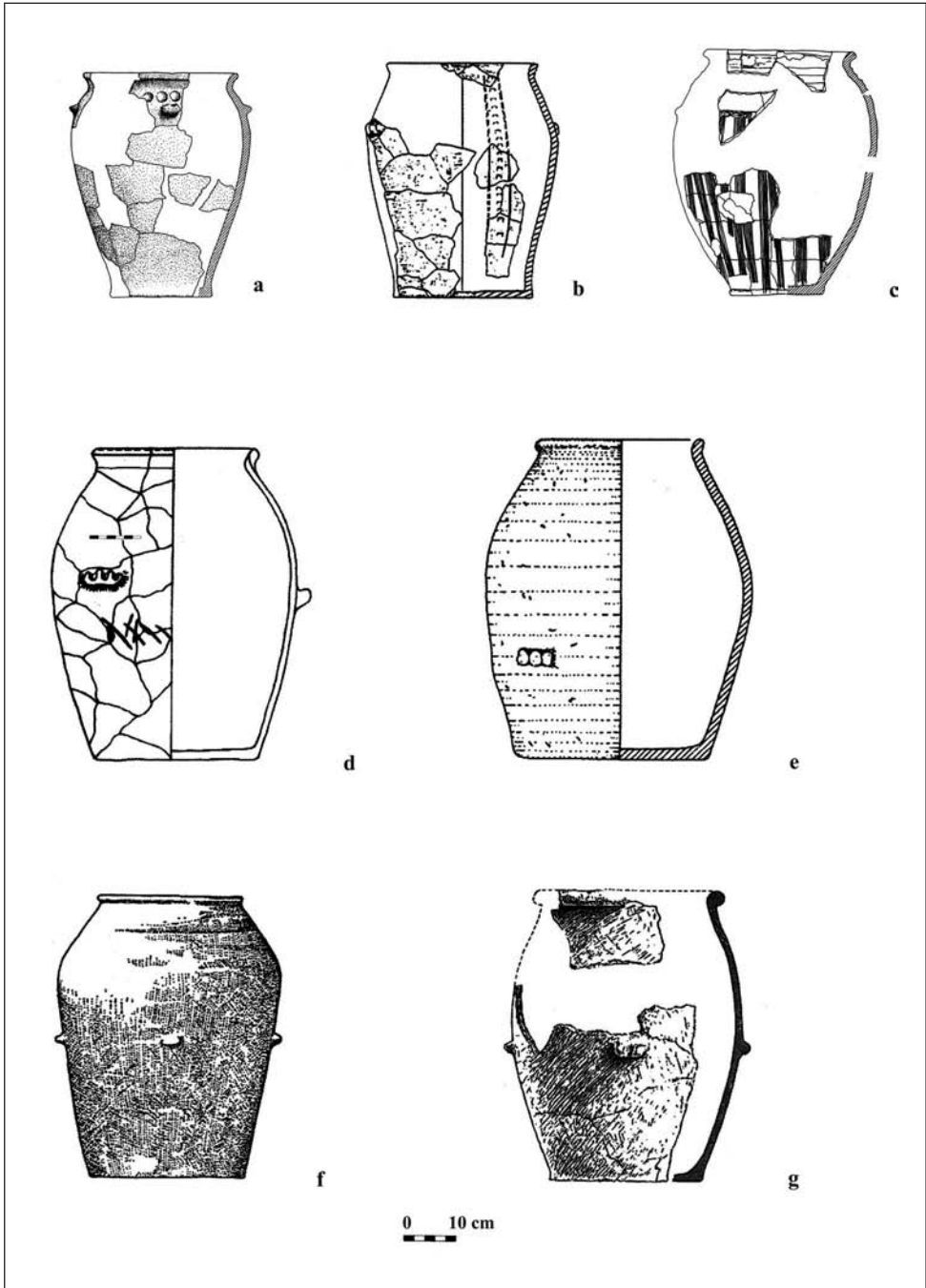


Fig. 2. Reconstructed examples of storage vessels from southern Lesser Poland: a – Tarnowiec site 1; b – Gorzyce site 3; c – Bessów site 3; d – Wieliczka site XI; e – Wieliczka site II; f – Kraków-Pychowice; g – Kraków-Kurdwanów

rims of wheel-made vessels, the so-called *dolia* (Fig. 3). Due to the small total number of rim fragments, a further, more detailed classification of rims was not undertaken, as every specimen would in fact belong to a separate type.

Vessels with an S-shaped rim

S-shaped rims are characteristic of all the above-described fully preserved forms. They are known both from the Kraków region and from the basin of the lower Duna-jec and Raba Rivers. In this latter territory, they were found on three settlements (Tarnowiec, site 1, Bessów, site 3 and Gorzyce, site 3).

A rich assemblage of storage vessel sherds with the rim type in question comes from the settlement at Tarnowiec, site 1 (Szpunar, Okoński 2004). The form from feature 311 on this settlement probably represents a storage vessel as well. Its rim diameter amounts to 36 cm, and its height to 43 cm. The vessel is distinguished by an ornament in the form of a single wavy line, which clearly resembles the decoration used on wheel-made vessels (Okoński, Szpunar 1999, Fig. 14:a). The chronological position of the discussed assemblage can be determined by the presence of fibula type A.84, which occurred mainly in phase B2b of the Early Roman Period, or in the beginning of phase B2/C1 (Dąbrowska 1995, 14–17).

Another two examples come from feature 299 from Tarnowiec. Both are decorated, one of them having an ornament in the form of knobs and finger imprints, which diverges from the canons of the Przeworsk culture decoration (Szpunar, Okoński 2004, plate 8a, 9a). The lack of unambiguous chronological indicators makes the determination of this feature's precise chronology impossible. Moreover, it is worth emphasizing that the inventory of feature 299 contained also numerous fragments of lids, pots with

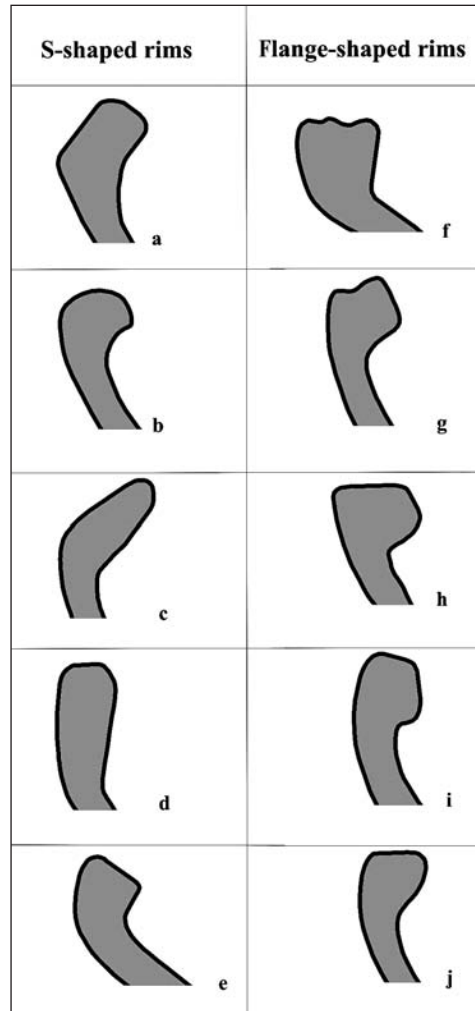


Fig. 3. Types of storage vessel rims

knobs or vessels with notches on the lip. None of these elements belong to the typical set of forms and ornaments known from other Przeworsk culture materials.

An upper part of a storage vessel comes from another feature in Tarnowiec. Compared to the above mentioned forms, the vessel from feature 266 has a much more everted rim (Szpunar, Okoński 2004, plate 5: i). Also in this case, conclusions

about chronology must be based on pottery material due to the lack of metal artifacts. A similar set of forms allows us to accept dating of this feature analogically to the above mentioned feature 299.

A vessel from Bessów, site 3 (Okoński *et al.* 2000, plate 15: a) has an S-shaped, strongly everted rim. Feature 4/2000, where it was found, is dated to phase B2 of the Roman Period. The vessel in question is decorated with a cordon placed in the upper part of its body, below which there are vertical bands made with comb, running down to the base (Fig. 2: c). However, it is worthwhile noticing that such ornament could facilitate handling large-size vessels, like it is the case for vessels with coarsened surfaces.

A vessel from Gorzyce, site 3, discovered in the fill of feature 100, has an elongated rim with the lip cut obliquely from outside (Szpunar, Szpunar 1991, plate 8: a). It is covered with the combination of incised, imprinted and relief ornaments (Fig. 2: b).

Vessels with S-shaped rims are known from the sites located in the Kraków region as well.

An interesting rim comes from feature 1/79 at Wieliczka, site XI. It is similar to the specimen from Gorzyce, but much shorter. This feature produced also another fragment of a large storage vessel of an undetermined diameter, with a rounded lip. It is decorated with shallow, wide circular furrows under the rim, in the upper part of the body. This kind of decoration is one of the most commonly used ornaments on storage vessels from the settlement at Púchov (Beninger 1932, fig. 95).

In the Kraków region, a rim of storage vessel was also discovered in Kraków-Kurdwanów (feature 100). It has elongated rim and lip cut straight (Fig. 3: d). It resembles the rim of a broad-mouth specimen from feature 172 from Podłęże, site 1 (Woźniak 1990, plate 29: c). This feature

marks the final horizon on the settlement and is dated to the beginning of phase B1 of the Early Roman Period (Woźniak 1990, 65). Feature 100 from Kraków-Kurdwanów yielded also a fragment of another storage vessel, with the rim thickened from outside and the lip rounded, slightly similar to the flange-shaped rims (Fig. 3: b). Other vessels from this assemblage find their direct analogies, both in form and decoration, in the inventory of feature 10/75 from the site Spišské Tomášovce-Čingov (Pieta 1982, plate L). This feature is dated by an *Augenfibel* A 50–53. *Augenfibeln* of A 53 type mark the decline of phase B1, although they can appear still in the beginning of phase B2a. A vessel with S-shaped rim also comes from the Early Roman Period settlement at Kraków-Pychowice³.

A relatively numerous assemblage of storage vessel fragments with S-shaped rims was produced by the settlement at Zagórzycze, district Kazimierza Wielka, site 1, located outside the analysed area (Pikulski 2006, master's thesis in the archives of Institute of Archaeology, JU; Grygiel, Pikulski 2006, 136–159). They were found, among others, in features dated by fibulae of A 100 type (Pikulski 2006, master's thesis in the archives of Institute of Archaeology, JU), which permits to place them within phase B2 of the Early Roman Period. However, the investigators of the site at Zagórzycze claim that there are reasons to believe that the vessels in question continued into the beginnings of the Younger Roman Period⁴.

Vessels with a flange-shaped rim, imitating the *dolium* type

In the Kraków region, only two settlements produced fragments of storage vessels with flange-shaped rims (Kraków-Wola

³ The context of the discovery is unknown.

⁴ Information courtesy of the investigators of the site.

Duchacka, Wieliczka, site XI). Flange-shaped rims are strongly thickened from outside and the width of the lip list amounts to 3.5 cm on average. They have different inclination of their inner part, and different form of a lip, which can be cut straight, obliquely or rounded (Fig. 3: f–j). Two differently shaped rims were discovered on the settlement at Kraków Wola-Duchacka. The first is strongly thickened from outside, and its lip is rounded (Fig. 3: i). The second has its inner lip inclined inwards, provided with two grooves (Fig. 3: f). This specimen can possibly be connected with the close of the Pre-Roman Period, when such a rim type was commonly represented. The presented fragments, like the majority of vessels from this settlement, have no precisely determined discovery context.

Feature 1/79 from Wieliczka, site XI, which contained also the S-shaped rims, yielded a specimen strongly thickened from outside, with the inner lip strongly curved inwards (Fig. 3: h). It has its analogies on the settlement at Podłęże. Z. Woźniak described rims of a similar shape as having a fluent profile (Woźniak 1990, 52, plate 25: d). The presented feature from Wieliczka produced also a thickened rim with a lip provided with a single groove (Fig. 3: g). Perhaps it is a hand-made imitation of wheel-thrown forms of a similar shape (e.g. Woźniak 1990, plate 12: i, 16: k). As a whole, material from the discussed feature from Wieliczka can be dated to phase B2, which is indicated by stylistic similarity to the vessels from feature 100 from Kraków-Kurdwanów.

The storage vessels discussed in this paper, both with S-shaped and flange-shaped rims, often come from features without precise dating. Their chronological position should be referred to dating of the settlement on which they were found. From Wieliczka, site XI, comes a fragment of a bronze fibula, probably of A. IV 68 type,

which confirms the existence of the settlement in phase B1 of the Early Roman Period (Reguła 1968, fig. 6: e). Among other settlements from the Kraków cluster, a slightly earlier horizon can be distinguished on the site Kraków-Wola Duchacka which produced two fibulae, one of them representing type N according to Kostrzewski and the other of Almgren's type 19–19a (Jamka 1946, 124). Such fibulae occur most numerous at the close of the Pre-Roman Period and in the beginning of the Early Roman Period (Völling 1995, p. 199, 216; 2005, 129). Such early chronological indicators are not known from settlement at Kraków-Kurdwanów, where a bronze "Augenfibel" fibula of Prussian series was found (Krauss 1957, fig. 2: a), which confirmed the use of the settlement in the early stage of phase B2 of the Early Roman Period. Larger number of metal artefacts comes from the settlement at Pychowice, which yielded as many as 11 fibulae (Naglik 1996, 207). Like in the case of Kurdwanów, the oldest settlement horizon is marked by "Augenfibel" fibula of A.60-61 type. From phases B2/C1 come four fibulae of Almgren group II and V, series 8, while other specimens should be already connected with the Younger Roman Period.

It should be noticed that storage vessels were already known in the La Tène culture milieu.

Wheel-made *dolia* with flange-shaped rims are often recorded on the eastern Celtic territories, where they occurred from LT D1 to the 1st century AD (Meduna 1980, plate 73, 18; Urban 1996, 199ff). It was probably not earlier than during phase LT D2 or the end of LT D1 that the vessels in question appeared in western Celtica (Furger-Gunti 1979, 87). They are also known from the Kraków region, from the range of the Tynec group. They are represented in large numbers on settlements at Krzesławice

(Poleska, Toboła 1987, plate 7: 4; 15: 16; 20: 11), Mogiła (Woźniak 2000), Tynec (Leńczyk 1956, 54, plate 32:7) or Podłęże (Woźniak 1990, plate 3: c,h; 5: d). It has also been proved that wheel-made *dolia* in the Tynec group materials are accompanied by their hand-made imitations, manufactured on a large scale and used for storing supplies (Woźniak 1990, 320). Also the storage vessels with S-shaped rim, bearing traces of top-turning on potter's wheel, are known from sites of the so-called phase III of the Tynec group. They were relatively numerous on the settlement at Krzesławice (Poleska, Toboła 1987, plate 6: 2; 13: 1; 14: 1; 25: 8; 30: 20; 1988, 100). Shaped in the same manner were also the rims of storage vessels known from the oppidum at Manching (Pingel 1971, 38) or from some Moravian settlements (Meduna 1980, 74). Wheel-made storage vessels occurred on the settlement in Budapest also in the beginning of the Early Roman Period (Bónis 1969, 181, 192). Hand-made storage vessels with flange-shaped rims are known in the late La Tène period from the range of the Púchov culture, where they are regarded as imitations of Celtic *dolia* (Pieta 1982, p. 100). Such vessels, dated to phase LT D1 and LT D2, are known in the territory of the Polish Carpathians from Puchov culture settlements at Maszkowice, site 1, Podegrodzie, site 1 and Żywiec "Grojec" (Madyda-Legutko 1996, 31).

Thick-walled vessels with strongly everted rims occurred also at Podegrodzie, site 9 (Madyda-Legutko 1996, plate 5: 2,6). A set of thick-walled body sherds, with characteristic massive, lenticular handles, is known from the settlement at Maszkowice (Cabalska 1970, plate 4: b,c, 1976, plate 4: 1–3,5). As it was mentioned above, such decoration appeared on hand-made pottery influenced by Dacian culture, occurring in the eastern and northern parts of the Carpathian

Basin (Točík 1959, 865, fig. 327). Vessels from Devin are younger. A feature containing four totally reconstructed *dolia* is dated to the 1st century AD (Plachá, Hlavicová 1978, 200, plate 106).

In this context it is worthwhile mentioning the fully preserved vessel from the fill of a pottery kiln from Sanok, site 54 (Madyda-Legutko *et al.* 2004, fig. 4:1). It is a wheel-made form, produced from clay with large amounts of temper, with effaceable surfaces. The discussed specimen is distinguished by the presence of lenticular handles below the midline of the vessel's body. Such knobs-handles are known from hand-made Púchov culture vessels as well as from the so-called "Celto-Dacian" circle. They are dated to the Pre-Roman Period and to the Early Roman Period (Točík 1959, 861; Poleska 2000, 89–90; Lasota, Pawlikowski 2009, 369). The radiocarbon date obtained from charcoal from the lower chamber of the kiln in Sanok falls to the period from the beginning of the modern era to ca. 90 AD, that is to the Early Roman Period (Madyda-Legutko *et al.* 2004, 702).

The analysis presented above shows that storage vessels with flange-shaped rims appear in the Early Roman Period on the Púchov culture settlements, majority of which were functioning already in the late La Tène period. On settlements at Kraków-Pychowice, Kraków-Kurdwanów, Kraków-Wola Duchacka and Wieliczka site XI, the share of the Przeworsk culture elements in pottery is very small and limited, as a matter of fact, to the presence of thin-walled ware with blackened surfaces. On the other hand, storage vessels with S-shaped rims are recorded mainly in the zone of Przeworsk culture settlement in the Dunajec and Raba basins (Tarnowiec, site 1, Gorzyce, site 3, Bessów, site 3). They are only sporadically discovered in the Kraków region.

Conclusions

The typological analysis, as well as a strong similarity between hand-made storage vessels from the close of the La Tène period and the Early Roman Period vessels confirm their genetic connections. In the discussed period, these forms undergo transformations that are similar to those which take place in the Puchov culture in its core territories. The ornament of furrows on the lip disappears, and the rim from Wieliczka, site XI, where only one furrow is made, may be considered a relic of this tradition. In the developed B2 phase, rims of storage vessels lose their characteristic thickening and become more S-shaped. Vessel bodies often take

a cylindrical form, while relief decoration is still in use, reflected by the presence of knobs-handles.

Apparently, the function of storage vessels in question can be directly connected with the location of sites where they were discovered. The appearance of the Púchov culture settlements was most probably related to the salt-springs exploitation (Madyda-Legutko *et al.* 2005, 308). Therefore, it is highly probable that these forms were used in the process of obtaining salt by evaporation of brine. It is worthwhile noticing the theory of M. Grünewald (1979, 56), who proposed to regard similar storage vessels from Carnuntum as containers for salt-preserved food.

Ręcznie lepiące naczynia zasobowe z wczesnego okresu rzymskiego z terenu Małopolski południowo-zachodniej.

We wczesnym okresie wpływów rzymskich na terenie Małopolski południowej, zajętej przez osadnictwo kultury przeworskiej, występują również pojedyncze osady kultury puchowskiej. Wśród materiałów ceramicznych obydwu wspomnianych kultur niewielki procent stanowią dużych rozmiarów naczynia określane jako zasobowe. Od form garnkowatych różni je zarówno technologia wykonania, wielkość (wysokość niektórych egzemplarzy osiąga nawet 1 m), szczegóły morfologiczne oraz stosowane w niewielkim zakresie zdobnictwo. We wczesnym okresie rzymskim całe naczynia oraz ich fragmenty odkrywane na prawym brzegu Wisły w okolicach Krakowa łączone są z osadnictwem kultury puchowskiej. Występują one również dalej na wschód, na obszarach zajętych przez kulturę przeworską (Ryc. 1). Na wspomnianych obszarach naczyniom zachowanym w całości towarzyszą ich liczne fragmenty, a największa ilość wystąpiła na osadzie w Wieliczce, stan. XI oraz w Tarnowcu, stan. 1. Podstawą do badań nad zróżnicowaniem morfologicznym naczyń zasobowych było 8 ręcznie lepiących, zachowanych w całości egzemplarzy pochodzących z osad istniejących we wczesnym okresie rzymskim (Ryc. 2). Cechą charakterystyczną naczyń zasobowych jest obecność w większości przypadków guzów-uchwyty umieszczonych najczęściej w połowie wysokości lub poniżej największej wydętości brzuśca. Jedną z podstawowych cech naczyń tego typu są również brzegi o zróżnicowanej formie. Wśród nich można wyróżnić dwie grupy tj. brzegi ukształtowane esowato oraz kryzowato (Ryc. 3). Naczynia zasobowe o kryzowato ukształtowanej krawędzi pojawiają się na osadach istniejących we wczesnym okresie rzymskim, łączonych z osadnictwem kultury puchowskiej, z których większość funkcjonowała już w okresie późnolatańskiego. Naczynia zasobowe o brzegach esowatych notowane są natomiast głównie w strefie osadnictwa kultury przeworskiej w dorzeczu Dunajca i Raby (Tarnowiec, stan. 1, Gorzyce, stan. 3, Bessów, stan. 3) w obiektach datowanych na rozwinięte stadium wczesnego okresu rzymskiego. Tylko sporadycznie odkrywane są w rejonie podkrakowskim.

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