

Confrontation of Social Strategies? – Danubian Fortified Settlements and the Funnel Beaker Monuments in SE Poland

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Zusammenfassung

In Südostpolen scheinen im vierten Jahrtausend v. Chr. zwei verschiedene Kulturtraditionen aufeinanderzutreffen, das „Danubische Neolithikum“, repräsentiert durch die Lublin-Wolhynische Kultur und die Modlnice-Gruppe der Lengyel-Kultur, die Złotniki-Wyciąże-Gruppe des Polgarkreises sowie die Südostgruppe der Trichterbecherkultur. Diese Traditionen unterscheiden sich deutlich im Hinblick auf ökonomische, soziale und rituelle Strategien zu unterscheiden, zu denen auch die Aufnahme der „megalithischen Idee“ im Kontext der Trichterbechergesellschaften gehört. Insgesamt ist von einer Transformation der danubischen Tradition hin zur Trichterbechertradition auszugehen. Nach einer Diskussion verschiedener Erklärungsmodelle dieses Wandels wird ein neuer Entwurf vorgelegt, der dem archäologischen Befund eher gerecht werden sollte und theoretisch im Habermas'schen Denken begründet ist.

Abstract

In south-eastern Poland, two distinct cultural traditions seem to meet and merge during the 4th Millenium BC, the “Danubian Circle” represented by the Lublin-Volhynian culture, the Modlnica group of the Lengyel culture and the Złotniki-Wyciąże group of the Polgar cycle and the south-eastern Group of the Funnel Beaker culture. Differences include economic strategies, social structures and ritual orientations, including the application of the “megalithic idea” by the Funnel Beaker societies. Generally, a transformation from the Danubian to the Funnel Beaker patterns can be described. After a discussion of different models explaining this process, an alternative approach is proposed considering the specifics of the south-eastern Polish archaeological evidence and grounded on theoretical approaches following Jürgen Habermas.

As early as in the 1930s Konrad Jażdżewski put forward a view that the South-Eastern group (fig. 1) of the Funnel Beaker culture (further: TRB) is an effect of influences of the Eastern group of this culture on local populations of the so-called Southern or Danubian cultures (Jażdżewski 1936, 258). For geographical reasons what may be mostly concerned here is the population of the Lublin-Volhynian culture (further: L-VC) and in the south-west edge of the South-Eastern group of the FBC the population of the Modlnica group of the Lengyel culture and the Złotniki-Wyciąże group of the Polgar cycle (fig. 2). The contribution of declining groups of the latest phase (IIb) of the Malice Culture is also not excluded (Kadrow 2009, 109 – 112, fig. 2, 3).

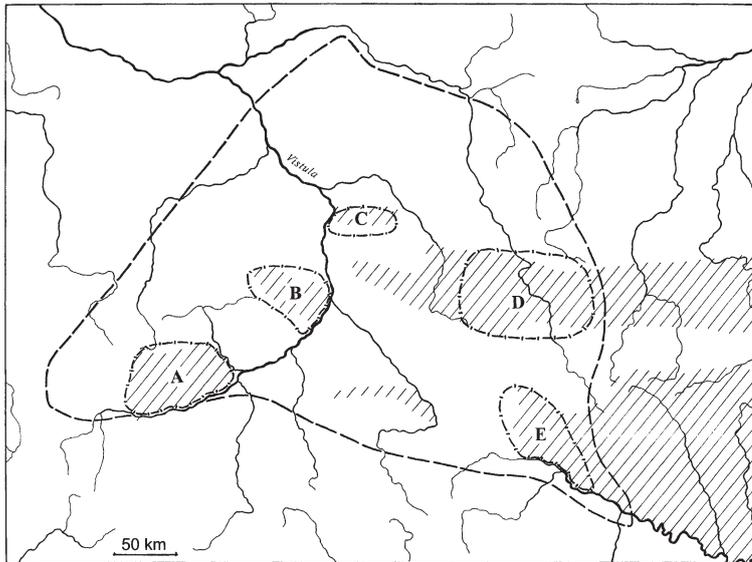


Fig. 1. Territorial range of the South-Eastern group of the Funnel Beaker culture and its main settlement agglomerations (A – Cracow, B – Sandomierz-Opatów, C – Lublin, D – West-Volhynian, E – Podolian) against the background of loess soils (hachured areas).

Abb. 1. Verbreitung der Südostgruppe der TRB und ihre bedeutendsten Siedlungsagglomerationen (A – Cracow, B – Sandomierz-Opatów, C – Lublin, D – West-Wolhynien, E – Podolien) auf dem Hintergrund der Lössböden (schraffierte Flächen).

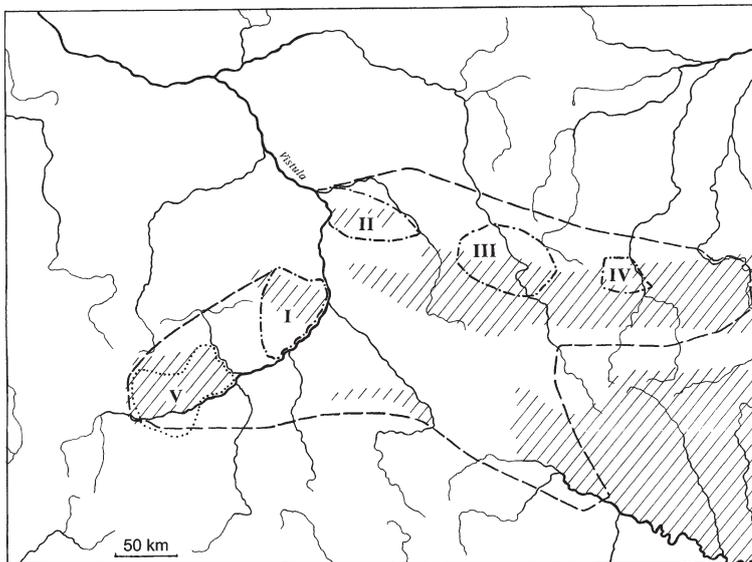


Fig. 2. Territorial range of the Lublin-Wolhynian culture and the Modlnica group of the Lengyel culture and their main settlement agglomerations (I – Sandomierz-Opatów, II – Lublin, III – West-Volhynian, IV – Volhynia, V – Modlnica and Złotniki-Wyciąże group) against the background of loess soils (hachured areas).

Abb. 2. Verbreitung der Lublin-Volhynischen Kultur und der Modlnica-Gruppe der Lengyel-Kultur und ihre bedeutendsten Siedlungsagglomerationen (I – Sandomierz-Opatów, II – Lublin, III – West-Volhynien, IV – Volhynien, V – Modlnica und die Złotniki-Wyciąże Gruppe) auf dem Hintergrund der Lössböden (schraffierte Flächen).

The older of them – L-VC is dated to the period between 4400/4200 and 3600 BC (Kadrow/Zakościelna 2000, 245–255, fig. 43–45; Zakościelna 2006a, 89, 90). The South-Eastern group of the FBC, however, is included in the period from 3650 to 3000/2600 BC (Kruk/Milisauskas 1990; 1999, 117–119; Bronicki et al. 2003, 28–32, fig. 3, 4, 27; Włodarczak 2006, 57-59, fig. 21).

Settlement centers of both cultural units are located on upland loess areas (fig. 1, 2). In the case of the L-VC this is an almost exclusive settlement zone. To the contrary, the FBC settlements to a large degree also occupied non-loess terrains (for instance sands of Niecka Nidziańska or Sandomierz Basin; cf. Nowak 1993; Zych 2008).

The problems of the L-VC settlement pattern still have not been reliably studied. This culture was usually treated as one of many elements of a commonly characterised mosaic of younger Danubian cultural groups (e.g. Kruk 1980, 33–46, 79–84, 90–95; Kruk/Milisauskas 1999, 61–101; Nowak 2009, 155–181). It obviously contributed to obliteration its specificity, not only as regards to settlement pattern.

Usually statements are made about settlement stagnancy manifesting itself in maintenance or even decrease of the number of sites in relation to earlier periods, in the time of younger Danubian (Danubian III) cultural groups existence (e.g. Kruk/Milisauskas 1999, 61).

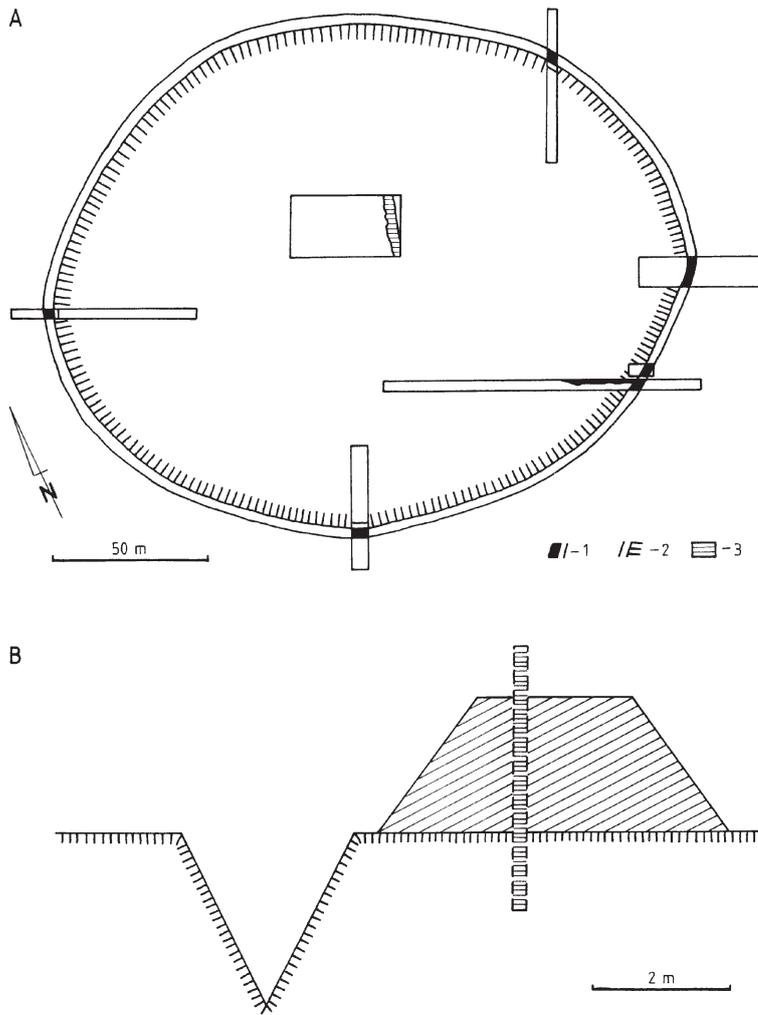


Fig. 3. Fortified settlement of the Lublin-Volhynian culture at Bronocice; 1 – excavated fragments of the ditch, 2 – reconstructed sections of the ditch, 3 – reconstructed embankment (acc. to Kruk/Milisauskas 1985).

Abb. 3. Befestigte Siedlung der Lublin-Wolhynischen Kultur in Bronocice; 1 – ausgegrabene Teile des Grabens, 2 – rekonstruierter Grabenquerschnitt, 3 – rekonstruierter Wallquerschnitt (n. Kruk/Milisauskas 1985).

The continuation of rules of the settlement occupation and spatial organization of the settlement are also suggested. As a rule also populating of the same settlement regions and sites as in the early Neolithic is accepted (Kruk/Milisauskas 1999, 61, 62). However, it should be admitted that tendencies to locate settlements on uplands and defensive character of part of them were noticed in the Lublin-Volhynian Culture (Kruk/Milisauskas 1999, 62).

Studies devoted to flint production (Zakościelna 1996, 19 – 26, map 1) and funeral rites of the L-VC (Zakościelna 2009a; 2009b) bring information about a great increase of the number of sites of this culture in relation to earlier periods, especially on the area of the West Volhynian and Lublin Uplands, and to a less degree on the Sandomierz-Opatów Upland. Except those known in literature examples of defensive settlements from the site Grodzisko I in Złota (Żurowski 1930; 1934; Sałacińska/Zakościelna 2007, fig. 8 – 10) and in Bronocice (Kruk/Milisauskas 1985, 41 – 51), settlements of this type in Zimno and Gródek Nadbużny (Kadrow/Zakościelna 2000, 240) are mentioned. Because of the presence of ditches (defensive?) maybe also the settlements in Las Stocki (Zakościelna 1986) and Strzyżów (Podkowińska 1960) should be included into this category.

Defensive settlements of the L-VC were up to 3 ha in size. They were surrounded by at least one ditch and an accompanying earthen embankment and wooden palisade. Probably according to the specificity of the terrain configuration they were of different sizes and shapes. In case of Bronocice (fig. 3) the ditch enclosed an oval area approximately 168x210 meters or 2,4 hectares. Probably the

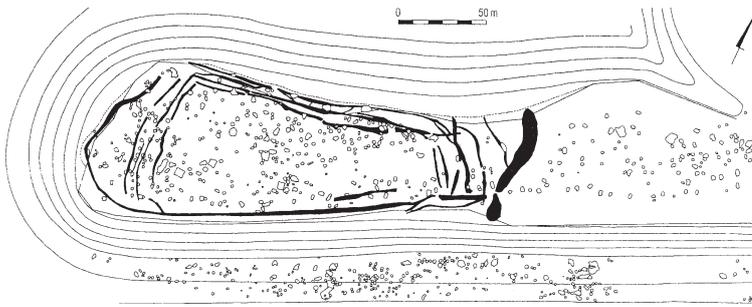


Fig. 4. Fortified settlement of the Lublin-Volhynian culture at Złota, Grodzisko II site (acc. to Sałacińska/Zakościelna 2007).

Abb. 4. Befestigte Siedlung der Lublin-Wolhynischen Kultur in Złota, Grodzisko II (n. Sałacińska/Zakościelna 2007).

ditch was continuous, because no interruptions of it were noted in the various excavation units. The depth (2,2 to 2,9 m) and width (1,0 to 1,96 m) of the ditch varied in different parts of the settlement. The V-shaped ditch was dug in the loess subsoil, and had oblique, step-like, down-sloping sides. This Step-like shape may have been caused by erosion processes. Parallel to the ditch, 2 meters away from it, was a 1 m wide, shallow trench containing traces of postmolds with the diameters of 20 cm. The space between them reached 20–30 cm. Postmolds represent traces of a palisade. The dirt from the ditch was probably used in construction of the embankment. Post-depositional processes (natural erosion and plowing) have removed the remains of it (Kruk/Milisauskas 1985, 24–26, 41-51, fig. 5, 15–20).

A defensive settlement in Złota is located on a promontory raised c. 30 m above the flood-land terrace of the Vistula. The area surrounded by ditches is c. 250 m long and 80–90 m wide (fig. 4). From the south it is surrounded by only one ditch and a steep slope of the promontory. From the west and north the number of parallel running ditches increases to 3–4 despite the fact that steep slopes also show natural defensive features there. From the east, the only side unlimited by a steep slope, which joins with the rest of the promontory and the upland the number of parallel running ditches increases to 6–7 (fig. 4).

Defensive settlements of the TRB in south-east Poland are not very often registered and are connected mainly with the late phase of this culture, for instance in Bronocice (Kruk/Milisauskas 1999, 126) and in Stryczowice (Uzarowicz-Chmielewska 1991). Great TRB settlements, characteristic of the loess zone, are relatively not numerous. Their area is several or even several dozen hectares (e.g. Bronocice). They are located on the edges of the heights, raised high above the bottoms of river valleys. Settlements of medium sizes are located in different landscape zones. Numerous small settlements and campsites as well as single finds concentrate around bigger settlements and are often discovered in uplands interiors. Great upland settlements of the TRB probably played a role of centers of economic and social-political organization (Kruk/Milisauskas 1999, 126).

It seems that, despite the lack of suitable studies, defensive settlements of the L-VC and bigger settlements of this culture lacking traces of defensive constructions, played a role of regional settlement centers as it was in the TRB. In many cases defensive settlements of the L-VC were afterwards inhabited by populations of the TRB. It happened for instance in Bronocice, Gródek Nadbużny and Zimno. Instead, the situation was different on defensive settlements in Złota and Strzyżów where no traces of the TRB settlement were recorded. Therefore, to some extent, central places of the former still functioned as regional settlement centers also within settlement the system of the latter culture. With some reservations a proposition may be submitted the TRB settlement system continued and considerably developed traditions of the L-VC settlement organized into vast settlement agglomerations grouped around great settlements – central places.

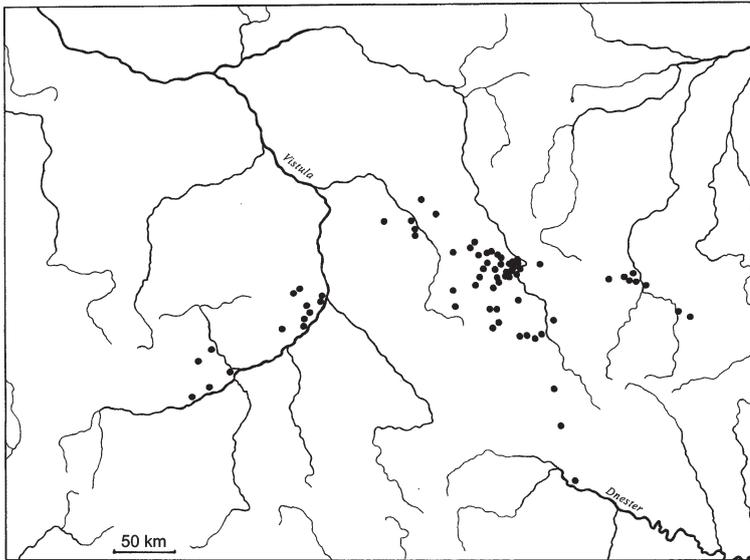


Fig. 5. Cemeteries and graves of Lublin-Volhynia culture (acc. to Zakościelna 2009).

Abb. 5. Gräberfelder und Bestattungen der Lublin-Wolhynischen Kultur (n. Zakościelna 2009).

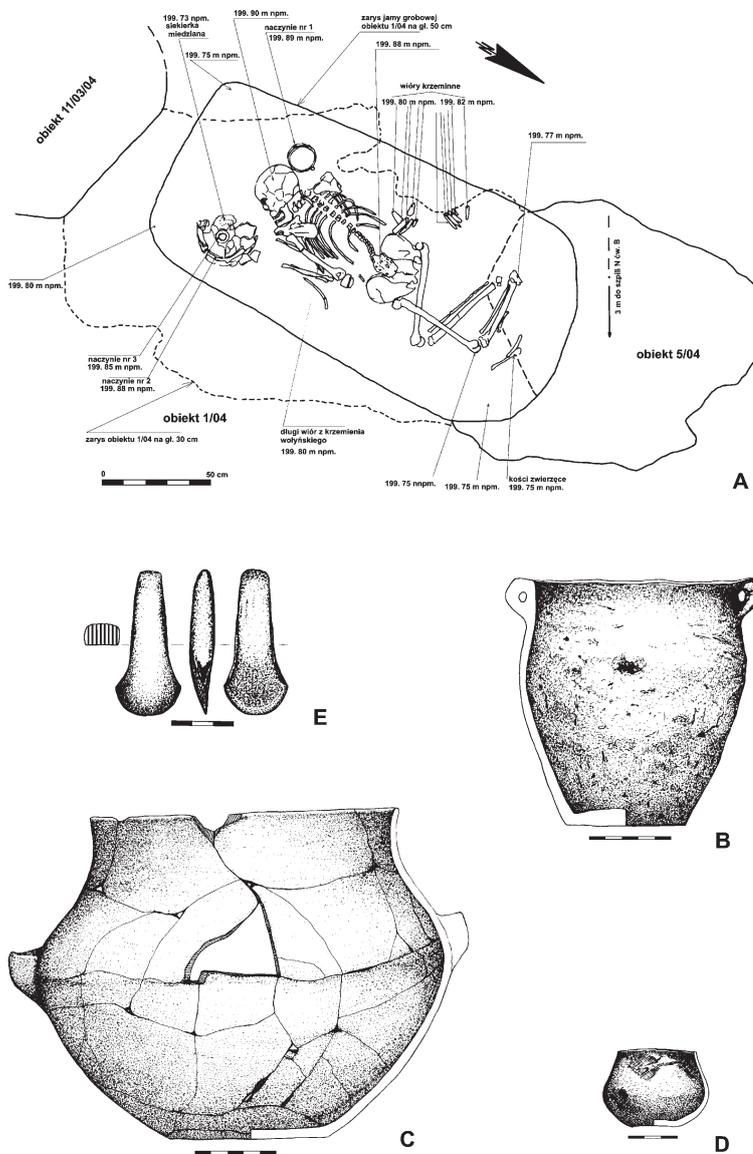


Fig. 6. Książnice Wielkie, grave 5 (acc. to Wilk 2006).

Abb. 6. Książnice Wielkie, Grab 5 (n. Wilk 2006).

An important difference of the TRB settlement system in comparison with its predecessor was the presence of a developed settlement system outside the loess zone on the para-lowland terrains of south-east Poland. Settlement on these areas never reached a stage of cen-

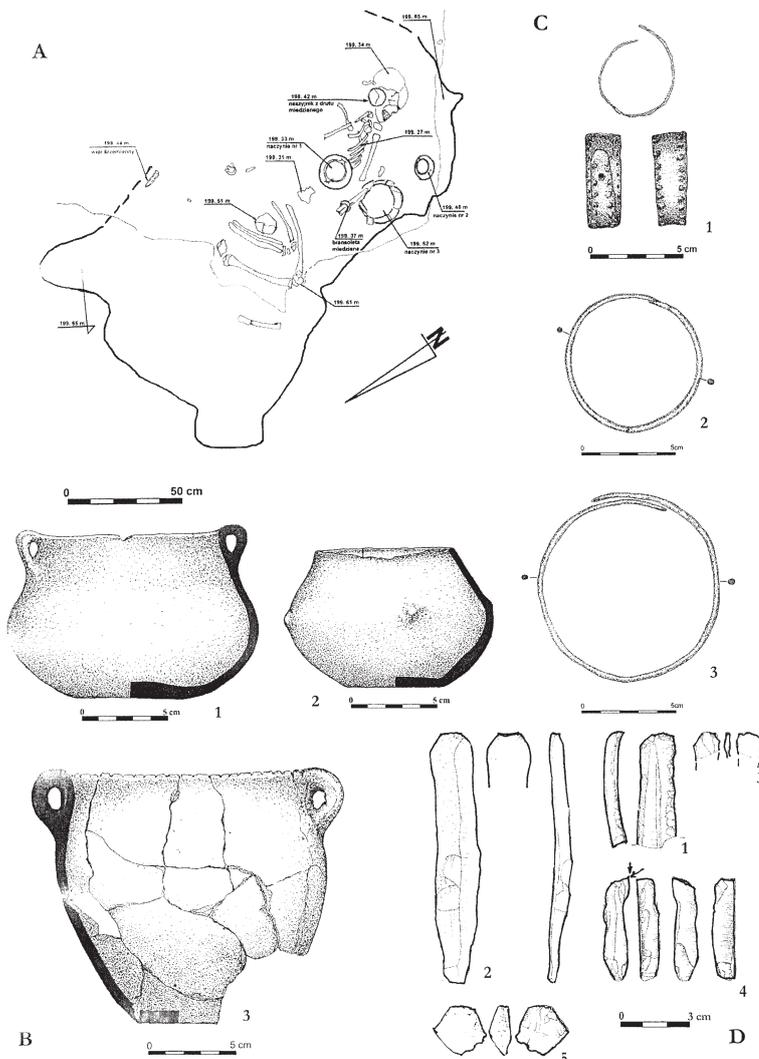


Fig. 7. Książnice Wielkie, grave 2 (acc. to Wilk 2006).

Abb. 7. Książnice Wielkie, Grab 2 (n. Wilk 2006).

tral places, remaining at the stage of medium settlements (c. f. Nowak 1993; Kruk/Milisauskas 1999, 120 – 124). Permanent settlements 1 – 2 ha in area and small settlements periodically inhabited as well as campsites of an area from several to 1000 sq meters were characteristic of these regions. A considerable part of the TRB sites on these areas is represented by traces of settlement in shape of single artifacts, probably being traces of short, single stays, connected with various activities (Nowak 1993, 65). The settlement on non-loess areas of south-east Poland closely refers to the situation in central Poland and its north part on the areas of the Lowlands (Kruk/Milisauskas 1999, 124).

If the settlement systems of the populations of both cultures quite closely corresponded with each other on loess uplands, as far as funeral rites are concerned, clear differences between them are visible.

At the beginnings, graves of the L-VC were located on the settlements areas, and were probably associated with habitation structures. At the end of the classic (II) phase of this culture small cemeteries appeared. They were located not far from the settlements and consisted of a few (5 – 7) graves (e. g. site IIa at Stryżów). In the late phase (III) there were small cemeteries situated away of settlements, often on exposed elevations (Zakościelna 2006 a, 89).

About 150 recorded graves of the L-VC contain skeletal burials of adults and children (fig. 5). The dead persons were deposited in grave pits in a contracted position. Men were deposited on the right (fig. 6), and women (fig. 7) on the left side. All of them had heads oriented to the south. First of all there were graves of only one individu-

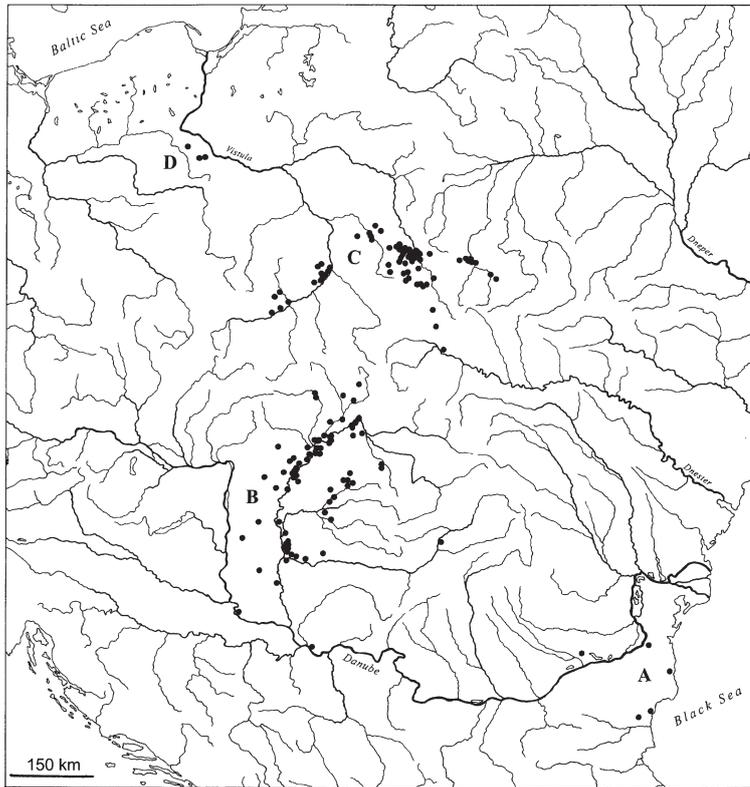


Fig. 8. Cemeteries and graves with gender differentiated burial rites: A – Hamangia and Varna cultures, B – Tiszapolgár and Bodrogkeresztúr cultures, C – Lublin-Volhynia culture, D – Brześć Kujawski group.

Abb. 8. Gräberfelder und Bestattungen mit geschlechtsspezifischer Bestattungssitte: A – Hamangia und Varna, B – Tiszapolgár and Bodrogkeresztúr, C – Lublin-Wolhynische Kultur, D – Brześć Kujawski Gruppe.

al, less often of two or three. Most of graves were furnished with various remains. Some of them were furnished very richly. Male graves contained copper axes, battle-axes (fig. 6) and chisels, bone and copper daggers, long blades and flint arrow-heads, while ornaments and beads made of shell were typical of female graves. Ceramic vessels, copper ornaments and pendants made from wild boar tusks, however, have been documented for both kinds of burials (Wilk 2004; 2006; Zakościelna 2006 b; 2009; Zakościelna/Matraszek 2007).

Several male or female graves known from the younger phase (III) of the Lublin-Volhynia culture, contemporaneous with the Bodrogkeresztúr culture, have yielded rich inventories corresponding to the richest graves at cemeteries within the Polgár cultural circle. Rich male burials are represented e.g. by Grave 3, with a copper battle-axe of the Şiria type, long blades and a ceramic vessel (Wilk 2004, 229 – 232), and Grave 5 (fig. 6), with a Felsőgalla type copper axe of the Szendrő variant, and long blades (Wilk 2006, 248 – 249, fig. 7 – 9) including a laminar oblique retouched blade, probably used as a dagger (Zakościelna 2006 b, 271, fig. 2), from Site 2 in Książnice. Richly furnished female graves are represented by Grave 2 (fig. 7) from the same site, containing ceramic vessels, flint artefacts, and three copper ornaments: a necklace and an armband made from copper wire, and a copper tape bracelet decorated with two rows of punched hollows (Wilk 2004, 227 – 229, fig. 4, 11).

Burial rites among communities of L-VC resemble and continue the rules of burial customs of the Hamangia and Varna cultures from the western coast of the Black Sea and the Polgár cultures from the Carpathian Basin (fig. 8). However, the TRB groups in SE Poland cultivated completely different funeral ceremonies. There were two lines of evolution of burial customs among them: a megalithic¹ and a non-megalithic one (cf. Florek 2006; Iwaniszewski 2006; Libera/Zakościelna 2006). This type of duality of TRB burial customs was recognized years ago also on the Polish Lowlands in Kuyavia (Chmielewski 1952, 33, 34; Wiślański 1969, 231 – 236).

1 The term 'megalithic' is used despite the lack of actual „large stones“ for the construction to refer to a burial custom that by shape clearly resembles megalithic structures of other regions in Central Europe.

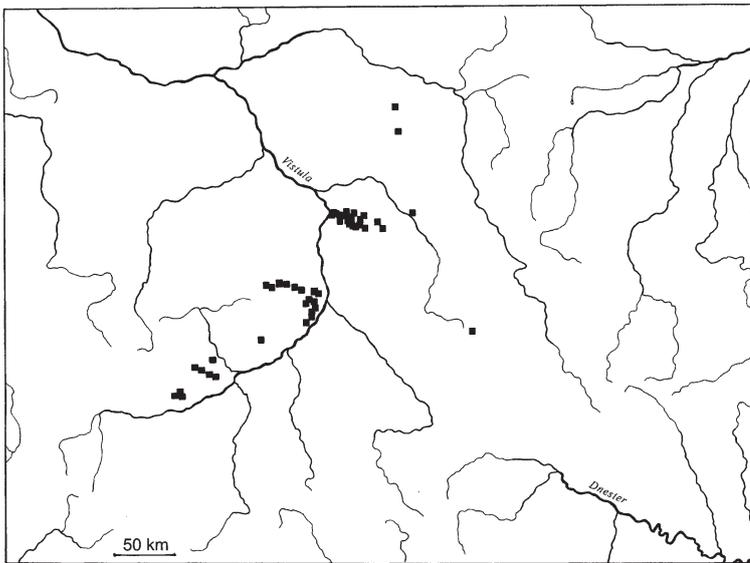


Fig. 9. Cemeteries and graves of South-Eastern group of the Funnel Beaker culture (acc. to Libera/Zakościelna 2006).

Abb. 9. Gräberfelder und Bestattungen der TRB-Südostgruppe (n. Libera/Zakościelna 2006).

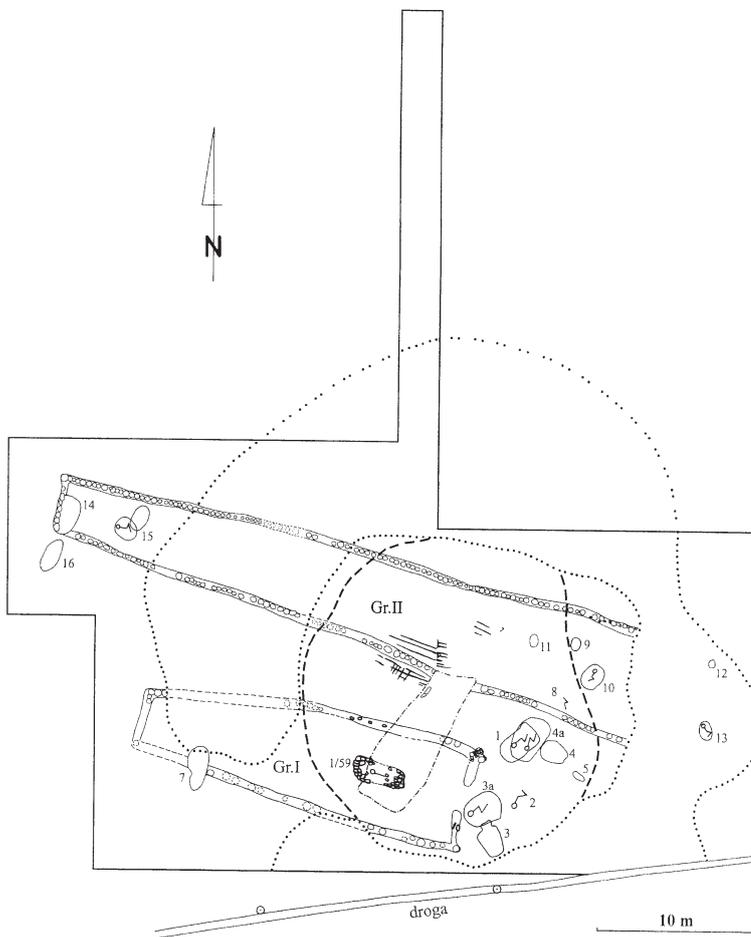


Fig. 10. Zagaje Stradowskie, TRB megalithic grave (acc. to Burchard 2006).

Abb. 10. Das megalithische TRB-Grab von Zagaje Stradowskie (n. Burchard 2006).

Till now, there are 414 discovered graves of the FBC in SE Poland (fig. 9). They were recorded on 53 sites including 18 ones with megaliths. Among them there are single graves (with some burials in settlement pits; cf. Florek 2006), cemeteries and megalithic constructions (Libera/Zakościelna 2006, 135, 136, 162, Tab. 1; Nowak 2009, 451 – 489).

Irrespective of the gender of the dead persons they were deposited on the back in straight position like on the other areas of the TRB in Europe (cf. Häusler 1994, 47 – 50). There is also no difference in this respect between megalithic and non-megalithic graves (Florek 2006, 413 – 419). To the so-called non-megalithic graves belong pit graves

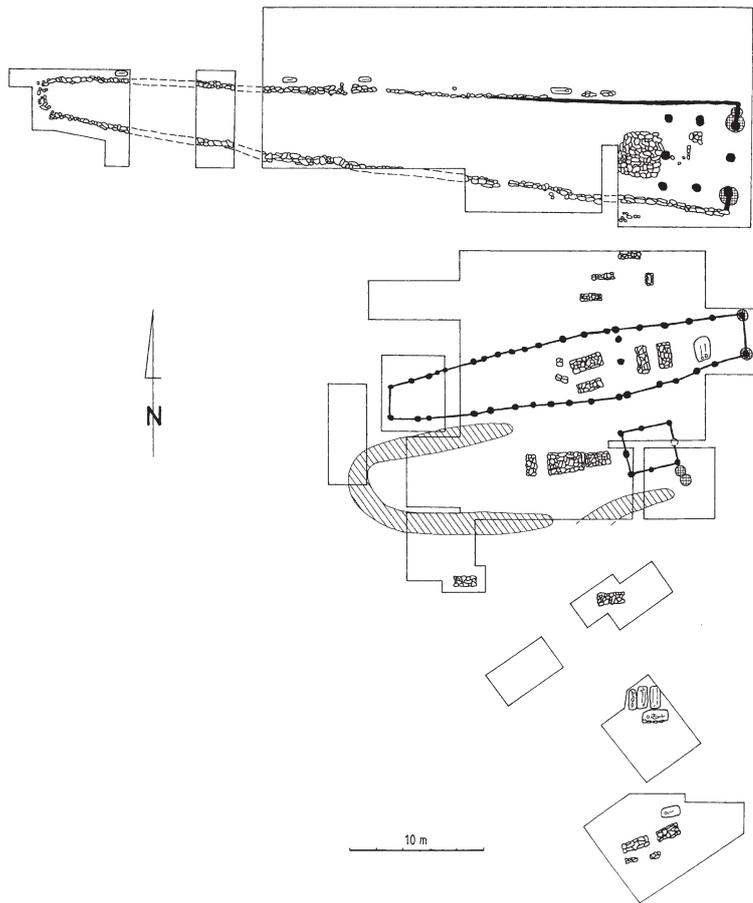


Fig. 11. Pawłów, TRB megalithic grave (acc. to Bargiel/Florek 2003).

Abb. 11. Das megalithische TRB-Grab von Pawłów (n. Bargiel/Florek 2003).

with or without stone elements and specific kind of burials located in settlements pits. Non-megalithic (flat) graves are located at the same cemeteries as megalithic ones (side by side of them), or create cemeteries consisting only of them (Florek 2006; 2008).

Megalithic constructions vary in size, construction techniques, form and chronological position in frames of the South-Eastern group of the TRB (Kruk 2006, 10, 11). All megaliths from SE Poland are characterized by the lack of chambers. Among others, cemeteries with graves under long, rectangular pavements formerly covered with earthen mounds (e.g. Karmanowice- Nogaj-Chachaj 1991; 1996 and Kichary Nowe- Kowalewska-Marszałek et al. 2006) were discovered. Another type is represented by long tombs with earthen mounds and stone kerbs (or without them) and burials with pavement (e.g. Lublin-Sławinek – Jastrzębski/Ślusarska 1985; Grzybów – Garbacz 1992; 2003; 2006; Stryczowice – Matraszek 2001; Matraszek/Sałaciński 2006). Another kind is trapezoidal or rectangular wooden-earthen constructions (Zagaje Stradowskie, fig. 10 – Burchard 1998; 2006; Niedźwiedź – Burchard 1973; Pawłów, fig. 11 – Bargiel/Florek 2003; 2006; Słonowice – Tunia 2006).

In Słonowice there are traces of at least seven long wooden-earthen graves and a ceremonial square of the area of 1.5 ha, surrounded by a dike and ditches (Tunia 1996; 2006; Kruk 2006). The length of the tombs ranged from 40 to 120 metres. The tombs walls were built of logs c. 20 cm in diameter. The biggest constructions were covered with earth and the smaller ones rather did not have earthen mounds (Kruk 2006, 11) and probably played a role of 'houses of the dead' (Tunia 1996).

There are interesting differences in the spatial arrangement of graves and cemeteries of the L-VC (fig. 5) and TRB (fig. 9). Sepulchral sites of the former concentrate mainly on the upper Bug on West Vol-

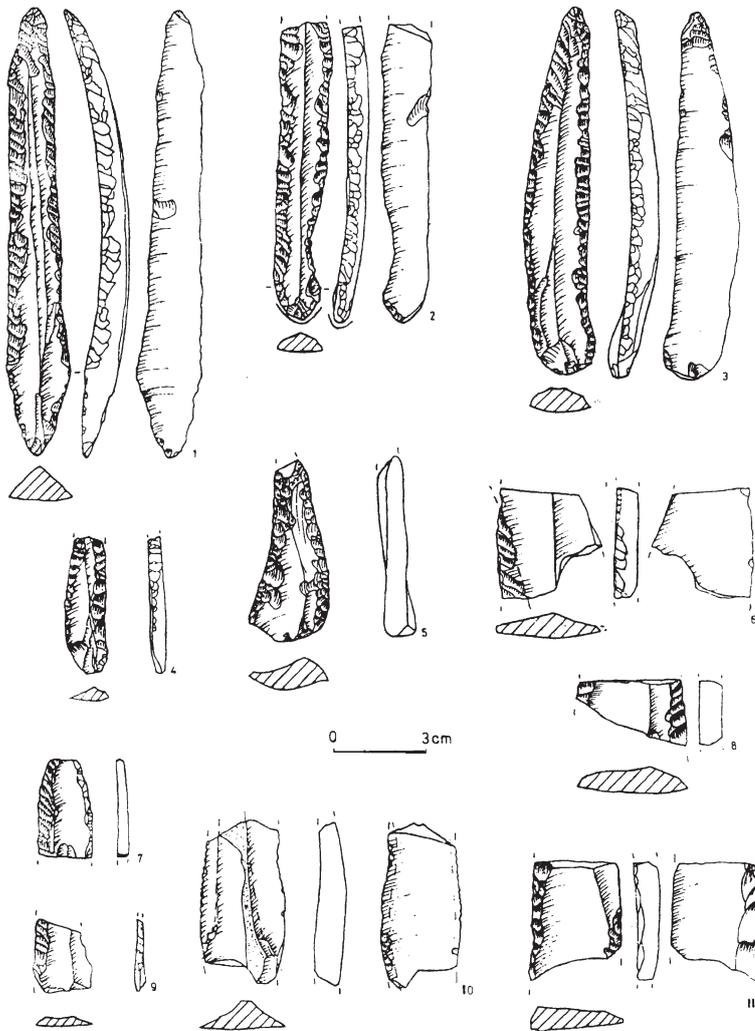


Fig. 12. Strzyżów, site 1D. Flint inventory of the Lublin-Volhynia culture (acc. Kadrow 1989).

Abb. 12. Strzyżów, 1D. Silexinventar der Lublin-Wolhynischen Kultur (n. Kadrow 1989).

hynian Upland (fig. 5). On the loess of the Sandomierz and Cracow areas there are considerably less of them. Analogous sites of the latter culture occur mainly on the Nałęczów Plateau, the Sandomierz-Opatów Upland and the western Little Poland loess uplands (fig. 9). Instead, they are quite completely not present on the West Volhynian Upland except a cemetery in Łubcze (Bagińska 2006).

The Flint industry of the L-VC is based on Volhynian (in the eastern zone) and chocolate raw materials (in the western zone of this culture; cf. Zakościelna 2006a, 88). It is focused on the blade production from single-platform cores (fig. 12). The length of blades reaches more than 20 cm (Zakościelna 1996, 48-55). Some of them were made using an implement increasing the pressure. Shorter ones were obtained using antler punches or direct pressure (Migal 2003, 61). The basic tool assemblage consists of retouched blades (31 – 37% of all tools), various burins (17 – 34%), end-scrapers (13 – 25%), truncations (8,5 – 17%), perforators, triangular arrowheads and trapezes (Zakościelna 1996, 72 – 76; 2006a, 88, 89). It is an average frequency of tools. As a rule their appearance on various sites differs considerably.

Laminar oblique retouch used to shape almost all retouched blades (fig. 12: 1-3) and triangular arrowheads, some truncations and end-scrapers belong to the most characteristic features of L-VC flint industry (Zakościelna 1996, 92 – 98). Among them a special place was occupied by some retouched blades shaped by this type of retouch and usually deposited in male graves at the breast of the dead, which suggests that they were worn round the neck and functioned as ceremonial daggers (Zakościelna 2006a, 89; 2006b, 281 – 284, fig. 2).

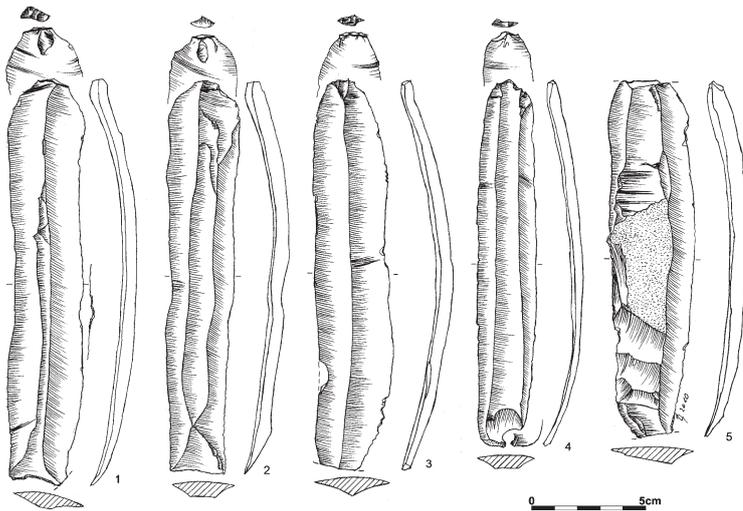


Fig. 13. Rogoźno, Hoard of Volhynian flint blades (acc. to Libera, zakościelna 2010).

Abb. 13. Rogoźno, Hort von Klängen Wolhynischer Flints (n. Libera/Zakościelna 2010).

TRB lithic production comprised two technology cycles (fig. 13). One of them geared to the production of macrolithic blades (fig. 13; cf. Libera/Zakościelna 2010). Another one was focused on the turning out large, quadrangular, wedge-shaped tools, i.e. flint axes (cf. Budziszewski 2006, 315). Various raw materials (Jurassic G, striped, Świeciechów and Volhynian) were used by TRB communities (Balcer 1983, 131, 132). Flat, single-platform cores with a wide flaking face formed by lateral crests were used to obtain long blades. Some of these blades, especially these ones with pronounced arch in their middle and gable roof-shaped butts, were made by using copper-tipped punches. Worn-out blades (sickle inserts) and retouched blades were reshaped into other tools (Budziszewski 2006, 315, 316). Wedge-shaped tools with quadrangular transverse section, in most cases axes, were also produced. One can distinguish two types of them. One comprised forms tapering gradually from the cutting edge towards the edge (produced of striped, Jurassic and Volhynian flints). The second type contains specimens with the widest part about a third down their length (produced of Świeciechów flint; cf. Budziszewski 2006, 318). The Flint tools assemblage consists of retouched blades (26–32% of all tools), end-scrapers (8–14%), perforators (2–5%), axes (5–8%) and others (Balcer 1983, 146–148).

Long blades and large axes were produced due to their symbolic meanings rather than functional requirements. Probably they served as prestige objects (Budziszewski 2000, 276–278). This production involved a multi-level system of specialization, apparent on various levels (of regions, settlements, and individual homes; cf. Budziszewski 2006, 318). A leading supra-regional role was played by Świeciechów and striped raw materials, which deposits are located in Holy Cross Mountains. Different tools were made of these flints. There were also differences in access to their deposits and processing organization. The same one can say about their distribution systems. In Volhynia imported assemblages of Świeciechów and striped tools differ in quantities of imported artefacts and regards to the kinds of implements and raw materials used to make them. Only finished tools were being distributed from the Holy Cross Mountains production centers. They circulated as a part of an exchange system of prestige goods (Budziszewski 2006, 318).

Starting from the classic phase of the L-VC copper artifacts appeared (fig. 14). There were mainly ornaments like earrings and bracelets of wire, round cross-sectioned or made of copper ribbons. In the late phase of this culture the assemblage of copper objects grew larger. Most of them were deposited in graves including triangular daggers,

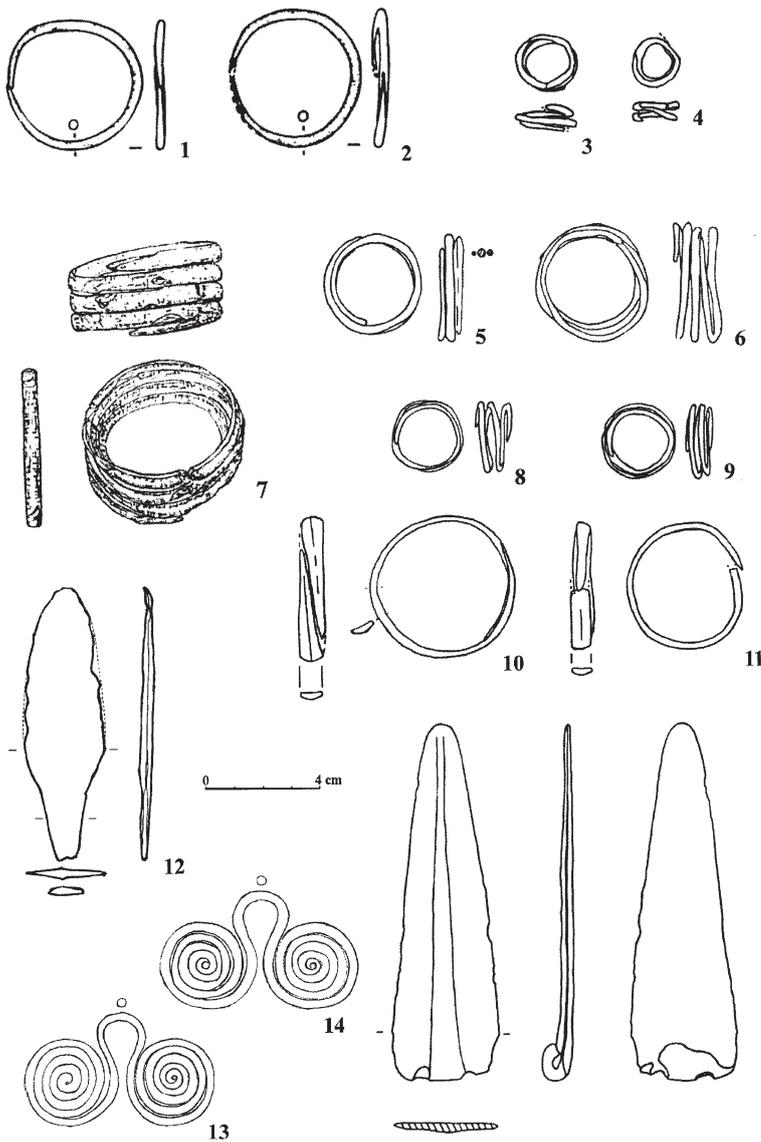


Fig. 14. Copper artefacts of the Lublin-Volhynia culture (acc. to Zakościelna 2006 a).

Fig. 14. Kupferartefakte der Lublin-Wolhynischen Kultur (n. Zakościelna 2006 a).

chisels, axes and battle-axes, double-spiral pendants of Stollhof type and more ornaments of other types (Kadrow/Zakościelna 2000, 223, 226, 230, fig. 32 a – c, 33, 34; Wilk 2004, 237 – 239, fig. 11, 14, 19; Wilk 2006, 254, fig. 7; Zakościelna 2006 a, 84, 85, fig. 5).

Findings of melting pots, ceramic tuyères and clay ladles on settlements at Złota (Podkowińska 1953, Table XVIII2), Las Stocki (Zakościelna 1985, fig. 1) and at Łañcut (Kadrow/Kłosińska 1989, 23, fig. 6, 13) confirm local copper metallurgy.

There is a lack of direct evidences of copper smelting in the TRB settlements in SE Poland. Copper artefacts (awls) at Gródek Nadbużny (Gumiński 1989, 166 – 171) come from mixed layers consisting of L-VC and FBC remains (cf. Bronicki et al. 2003, 25 – 27). However, numerous long blades made by means of copper-tipped punches confirm the application of copper implements in flint production centers (Budziszewski 2000, 259, 279).

An attempt at a reconstruction of the mechanism of - only generally signaled by Konrad Jażdżewski (1936, 258) - cultural change in south-east Poland, the effect of which was the replacement the Danubian cultures (L-VC) by the TRB was presented by Janusz Kruk (1973, 220 – 222; 1980, 327 – 329; 1993) and by Marek Nowak (2004; 2009, 533 – 573).

The former concentrated on interconnected changes of the way of food gaining, settlement system and changes of natural environment. The Economic development on the loess areas in the 4th millennium BC could be divided into two phases. The first was characterized by a digging stick or garden type agriculture which lasted from the beginning of the Neolithic to 3710 BC and in some regions this phase lasted 200 years later. Most settlements were located just above the floodplains on the very fertile soils, suitable for horticulture. However, already in this phase an expansion of farming culture into the uplands occurred initially. This phase is characteristic for the Danubian cultures (Kruk et al. 1996, 96 – 100).

During the second phase the density of sites increased and economic activities intensified. The population grew up and an extensive agricultural exploitation of the mentioned areas occurred. Herding of cattle and sheep became more important. The processes of social differentiation began. Fortified settlements prove the existence of tension and competition among communities. Stone battle-axes and flint axes support this idea. In this time thick silts accumulated in river valleys, being the result of the clearing of forests from slopes and elevations, which started at the beginning of TRB occupation and continued later on. Malacological data show that intensive slash and burn agriculture contributed on loess areas to the formation of grasslands (Kruk et al. 1996, 100 – 104).

In the light of Janusz Kruk's conception the culture change at the end of the first half of the 4th millennium BC (the critical moment at about 3650 BC) consisted in the victory of the one of two economic strategies competing in the exploitation of the loess areas in the south-eastern part of Poland. There were two such strategies: (1) horticulture of the digging stick type in the river valleys with relative small stable settlements typical for the Danubian cultures, and (2) a slash and burn extensive agriculture on the watersheds with settlement agglomerations around large settlements (sometimes fortified) typical for the TRB. The second strategy appeared to be more economically effective and populations of the TRB, using it from the beginning of this culture on the Polish Lowlands (Wiślański 1969, 209 – 212), immigrating into south-east Poland in the first half of the 4th millennium BC, obtained advantage over local Danubian communities.

Marek Nowak in his model takes into consideration settlement and economic aspects as well as social, cultural and ideological ones (Nowak 2009, 533 – 573). During the first 2 – 3 centuries of the 4th millennium BC "early beaker" (early TRB) societies, which were at the stage of expansion, contacted with population of the Danubian cultures among others in south-eastern Poland. This expansion was possible owing to the flexible settlement and the economic model, represented by these groups. Owing to the monumental megalithic idea, "early beaker" groups were an attractive pattern to be followed. Danubian population, on accepting the megalithic idea also accepted other attributes of the TRB "package", including pottery. The presence of units of over and above average prestige and social status became tempting and worth following for at least some units and groups of the population in the late phases of the Danubian cultures circle evolution. As a result, these groups became components of "early beaker Neolithization processes" (Nowak 2009, 572).

Danubian settlement on loess uplands of south-east Poland became liquidated as a result of stepwise colonization (since c. 3900 BC), frontal mobility and infiltration c. 3600 BC. The acculturation of Danubian groups by "early beaker" populations was to be, according to Marek Nowak, "selective behaviours, promoting the "beaker", attractive model of social relations, food economy and ideology". The

Domination of a “beaker” system of information circulation in conditions of progressive demographic increase caused the development of its social complexity (Nowak 2009, 573).

Both interesting models of cultural change in the middle of the 4th millennium BC on loess uplands of south-east Poland mentioned above, too much stress the coherence of the picture of Danubian cultural units and do not take into account the specificity of the Lublin-Volhynian culture, most advanced in respect of the civilization element of the Danubian cultures on the terrains situated north of the Carpathians. Both models also show a lack of differentiation between factors of cultural change, which were necessary but insufficient and factors necessary and decisive about this change.

Hitherto attempts to characterise settlement and economy of the younger Danubian cultures in south-east Poland were made on the grounds of the situation stated and interpreted on the loess uplands of west Little Poland (c.f. Kruk 1973, 49 – 54, 74 – 76, 94 – 99, 156 – 175, 218 – 220; Kruk et al. 1996, 28, 96 – 100). On this area younger Danubian cultures are represented by the Modlnica and Złotniki-Wyciąże groups (fig. 2), whose civilization development considerably differed from the level gained by societies of the L-VC, developing mainly on loess areas of Sandomierz-Opatów, Lublin, West Volhynia and Rzeszów and Przemyśl (fig. 2), that is on areas afterwards occupied by the south-east group of the TRB (fig. 1). What is characteristic of the latter is a network of big, mostly fortified central settlements (fig. 3, 4), developed copper metallurgy (fig. 14) and flint production aimed at the production of long blades (fig. 12). Moreover, absent in other Danubian cultural groups burial ceremonies are also characteristic. A rule of differentiated deposition of the bodies in a grave pit and their equipment according to the gender as well as single graves and an establishment of cemeteries outside the settlements prevailed. This rule closely refers to rules in the Polgar cultural circle (Tiszapolgar and Bodrogkeresztur), and earlier in the western Black Sea Hamangia and Varna cultures (fig. 8).

Definite changes in south-east Poland in the middle of the 4th millennium BC are therefore visible not exactly in strategies of occupation and exploitation of the terrain and economy, but rather in funeral rites and the range of specialization and organization of flint production and copper metallurgy. This directs our attention towards deep changes in the sphere of spiritual culture and social organization that is the so-called superstructure, which divided the societies of the Danubian cultures (first of all L-VC) and the TRB.

According to Jürgen Habermas the power and rule system in traditional societies (tribes, chiefdoms and early-states) play the same role, which in “western capitalism” plays the base with economic structure (Habermas 1983, 492). They are parts of the superstructure. Studying demographic, environmental-economic or technological conditions is not enough to recognize it. These are components of necessary but insufficient conditions to start political-organizational transformations. Instead, what is useful is the knowledge on functioning pictures of the world in a given society, in which moral-practical instructions of solving organizational-lawful problems with necessary religious content and connected with people’s outlook on life framing are included (Habermas 1983, 494; c. f. also Kadrow 2008, 197, 198; Kadrow 2010, 66, 67). The way to an archaeological recognition of any part of these pictures of the world, containing the knowledge on religion as well as structures and social organization is among others studies on funeral rites, settlement structure and social organization of various forms of production.

Distinct differences of pictures of the world (broadly understood social-cultural sphere) of the L-VC and TRB societies in south-east Po-

land manifest themselves first of all in the status of individuals, what is reflected in funeral rites and in social-organizational solutions visible among others in the organization of flint production, in differentiated copper products exploitation.

Detailed characteristics of the L-VC funeral rites, taking into account the rules of deposition of bodies and their equipment differentiated according to gender (Zakościelna 2009, 120 – 132, 142 – 152) indicates its close similarity to rituals in the Tiszapolgár and Bodrogkeresztúr cultures (Bognar-Kutzian 1963). Likewise in the eastern part of the Carpathian Basin, weapons were deposited only in male graves (fig. 6). An analysis of available sources inclines us to a supposition about the existence of male associations of a military character in the above mentioned cultures, access to which was regulated by attaining suitable age by young men, for instance on a cemetery in Tiszpolgar-Basatanya, between 16/18 and 25/35 (Vandkilde 2006 a, 404 – 410). Societies, of which these associations were typical are characterized by individualistic behavior of its members, that is warriors. Most frequently male military associations occurred in cultures with patrilineal rules of habitation after marriage and patrilineal rules of inheritance in conditions of stabile economy (Vandkilde 2006 a, 398). Abundance of prestige objects (including copper ones) deposited mainly in male graves of the L-VC (Zakościelna 2009, 127 – 132, 147 – 152) proves the functioning of quite intensive but elemental processes of inner differentiation of the society of the discussed culture, especially in form of expressing aspirations to gaining higher social status by a group of most ambitious and active men (Kadrow 2008, 195; Kadrow 2010, 84).

Constant compliance with individual rules of funeral rites in the L-VC, as in the Hamangia, Varna, Tiszapolgar and Bodrogkeresztur cultures, may indicate a contrast of social positions of genders also in everyday life of representatives of these cultures, as, for instance in the society of the late Mycenaean culture, described by Homer (c. f. e. g. Ossowska 2000, 22 – 35; Vandkilde 2006 b, 522 – 525). Mycenaean societies are the oldest historically perceptible manifestation of the functioning of a 'knight's ethos (Ossowska 2000, 22 – 27)'. Knight's ethos manifested itself in different epochs and in different places (Ossowska 2000). A number of common features defines all kinds of knight's ethos, other are characteristic only of time-spatial variants. Among north- and central European societies of the 5th and 4th millennia BC, that underwent processes of militarization, it was characteristic of probably only above mentioned cultures (c. f. Kadrow 2010, 84). Sporadic occurrences of weapons in male burials of the south-east group of the TRB (Vandkilde 2006 a, 404) may testify the functioning of the idea of militarization also among the society of this culture but in definitely less intensive and uninstitutionalized form.

Completely different funeral rites are characteristic for the TRB; it does not contain any elements, which may be derived from the L-VC or any other culture of the Danubian circle (Jankowska 2005, 139, 140). Contrary to the unified picture of the L-VC funeral rites (c. f. Zakościelna 2009) funeral customs of the TRB population in south-east Poland may be placed within two ideas: megalithic and non-megalithic (Florek 2006; 2008; Libera/Zakościelna 2006; Nowak 2009, 456 – 489). These local manifestations of the megalithic idea was shaped on the terrains of the Polish Lowland (Nowak 2009, 489), although they were like enough inspired by western influences (c. f. e. g. Midgley 2005; Rzepecki 2004; 2006). Independently of manifold functions performed by megalithic structures (c. f. Kruk 2006) its occurrence is connected rather with the manifestation of group (ancestral) social ties (e. g. Bintliff 1984, 88; Sherratt 1984, 126; Damm 1991, 70 – 77) and not with individualism of the warriors, that is members of

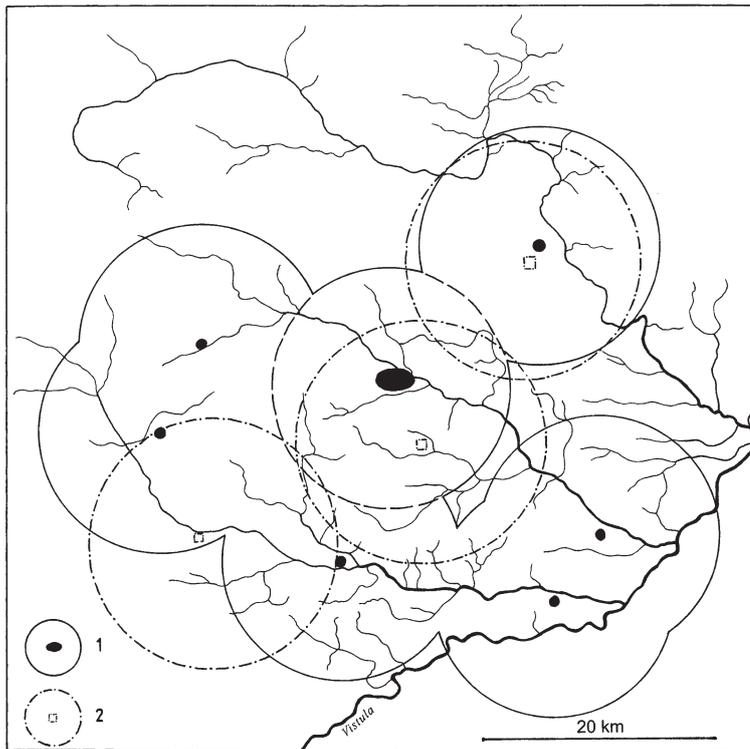


Fig. 15. TRB central settlements (1) and megalithic constructions (2) and their "site catchments" on the loess uplands of the Cracow settlement agglomeration (in part acc. to Kruk et al. 1996).

Abb. 15. TRB Zentralsiedlungen (1) und megalithische Konstruktionen (2) und ihre "site catchments" auf den Lösshochflächen der Krakauer Siedlungsagglomeration (z. T. n. Kruk et al. 1996).

male associations of military character (Vandkilde 2006 a, 398), characteristic of the L-VC. It is interesting that central settlements and ritual places with megalithic construction were not located in the same places or in their neighborhood (fig. 15). It can support an impression of complication of social organization of TRB communities.

In the south-east group of the TRB less advanced processes of elemental differentiation of the society are testified by circulation of prestige objects, mainly in form of long blades and quadrangular flint axes (Budziszewski 2006, 324 – 326; Libera/Zakościelna 2006, 162, 163). Contrary to the north group of the TRB (Klassen 2004, 257 – 267) there is no evidence of metallurgy and the use of copper objects of symbolic and prestige functions. Instead, in centers of flint production quite commonly copper tools were used, which were implemented in a process of core exploitation aiming at obtaining long blades. This utilitarian use of copper products by the TRB population decidedly stands in contrast with the practice of the L-VC societies, which deposited prestige metal products in male graves (weapon) and female ones (decorations; c.f. Zakościelna 2009, 148 – 152, 128 – 132).

In the frames of the south-eastern group of FBC Janusz Budziszewski recognized a multi-level system of specialization of flint production. It is apparent on the level of regions, settlements and dwellings (Budziszewski 2006, 318). Regional-scale specialization is illustrated by links of various settlement agglomerations to local raw material deposits. The exposed role in this matter was played by artefacts made of raw materials originating in the Holly Cross Mountains. They were exported in large amounts from the Sandomierz-Opatów Upland to Volhynia, the Lublin and Cracow loess areas. At the Gawroniec site in Ćmielów there is an evidence for specialization on settlement level and distinct flint workshops at the same site prove the existence of personal specialization (Budziszewski 2006, 318). However, there are no traces of such multi-level specialization of flint production in L-VC (Zakościelna 1996, 77 – 99).

In the light of the mentioned facts and their interpretation, societies of the south-east group of the TRB demonstrated a consider-

ably higher level of inner complexity than populations of the L-VC. Settlement system, variety of occupied environmental zones and applied economic strategies caused that they were more universal, effective and better adapted to the exploitation of available resources. This flexibility, complexity and economic multidirectivity must have been conditioned by new, decidedly more receptive organizational-lawful conditions and connected with an outlook on life structure, in which reconciliation and co-existence of different traditions: Northern ("early beaker") and Danubian was possible. Owing to this socio-economic model the TRB proved its superiority over the single-track and narrowly specialized model of the L-VC and replaced it in the middle of the 4th millennium BC in south-east Poland.

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