

Bell Beaker cultural package in the East European periphery of the phenomenon: a case of ritual features in north-eastern Poland

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ABSTRACT – *The Bell Beaker (BB) cultural package is one of the concepts explaining the extensive diffusion of this phenomenon in Europe. Artefacts associated with the package, discovered mainly in the graves of men, form groups defining the status of the deceased. The BB package is a dynamic turn of events, changing depending on the region, but preserving certain characteristic traits. The complete set of its initial ingredients was not copied in any location, and new local elements were added in various areas of its diffusion. The ritual features unearthed in north-eastern Poland, which contained elements of the BB package, are the assemblages located the furthest in the East European periphery of the phenomenon. The eco- and artefacts from these assemblages are difficult to interpret conclusively within the framework of the classic BB package, as well as in terms of its changes associated with its diffusion. This is connected with the fact that they include elements unknown among the local cultural entities, which reflect the broad circle of contacts their owners maintained.*

KEY WORDS – *Bell Beaker cultural package; ritual features; north-eastern Poland*

Kulturni paket zvončastih čaš na obrobju pojava v vzhodni Evropi: primer ritualnih značilnosti na severovzhodu Poljske

IZVLEČEK – *Kulturni paket zvončastih čaš je eden od konceptov, s katerim razlagamo obsežno širjenje tega pojava v Evropi. Najdbe, ki jih povezujemo s tem paketom, so bile odkriti predvsem v moških grobovih, pri čemer oblikovane skupine določajo status pokojnika. Ta kulturni paket predstavlja dinamičen razvoj dogodkov, ki se spreminja glede na regijo, pri čemer pa ohranja določene značilne lastnosti. Celoten nabor začetnih sestavin tega paketa ni bil kopiran na nobenem mestu, so pa bili dodani novi lokalni elementi na različnih območjih njegove difuzije. Ritualne značilnosti, ki so jih izkopal na severovzhodu Poljske, vsebujejo elemente kulturnega paketa zvončastih čaš in so hkrati primer najbolj oddaljenega obrobja tega pojava v vzhodni Evropi. Ekofakte in najdbe teh zbirorov je težko dokončno interpretirati tako v okviru klasičnega paketa kulture zvončastih čaš kot v smislu sprememb, ki so povezane z difuzijo tega paketa. To je povezano z dejstvom, da paket vključuje neznane elemente med lokalnimi kulturnimi entitetami, ki odsevajo širši krog povezav, ki so jih vzdrževali njihovi nosilci.*

KLJUČNE BESEDE – *kulturni paket zvončastih čaš; ritualne značilnosti; severovzhodna Poljska*

Introduction

Bell Beakers (BB) as a cultural phenomenon have been a subject of research since the 19th century. This is a consequence of not only the high level of identification of sources associated with this cultural entity (mainly pottery) in archaeological material, but also their broad distribution in Europe and even in north-western Africa. The reasons for such dispersion are still under analysis. Some data also indicate significant mobility of representatives of this cultural formation, which is confirmed by analyses of strontium and oxygen isotopes, *e.g.*, in the Amesbury archer (Chenery, Evans 2011). One of the results of such a situation is a high degree of heterogeneity of the artefacts associated with BB in a given area, which often led to issues with interpretation. This is reflected by various concepts accounting for this phenomenon – from an archaeological culture, cultural package to civilization perspective (*cf.* Lemerrier 2018, Fig. 4). Other studies on trends in the implementation of various innovations connected with BB in several European regions show that there were many local ways in which the groups adopted or even invented different innovations (*e.g.*, metallurgy or a certain type of pottery), as well as many ways of exchange of ideas, traffic of various objects and migration of particular individuals (Kleijne 2019, 194). As indicated by Oliver Lemerrier (2018, 77), both the similarities and differences in BB sources probably stem from the means of diffusion, which might have been connected with the artefacts or ideas themselves, particular individuals, or whole populations. One of the possible means of diffusion is associated with a broader understanding of the term cultural package.

In methodological assumptions the term cultural package refers to an artefact assemblage, not to an archaeological culture, with both terms used in contrast to the other. Archaeological cultures in the classical definition are stable entities (taxonomical units) with discriminative traits, determined on the basis of internal similarities and external differences, visible mainly in portable artefacts and fixed features characterized by a strictly defined location in time and space. From the perspective proposed by Frank Roy Hodson, in which significant characteristics and style types are essential, a culture is a recurrent set of style types (Hodson 1980, 6).

On the other hand, a cultural package is, according to Steven Shennan (1982, 159), a group of status-defining objects, *i.e.* a set of personal belongings used

to demonstrate the prestige of the owner, who enjoyed a high status in a given society (see also Renfrew 2001, 122). The cultural package, free from the limitations of strict relations between the artefacts and time and space (*intra-assemblage relationships* acc. Hodson), emphasizes the properties showing significant dynamics of participation of various individuals and their groups (*e.g.*, secret societies) in the transmission of cultural information (codes). Janusz Czebreszuk, although he agreed with the basic assumptions concerning the cultural package, suggested that it should be specified and used with reference to phenomena characteristic of BB and visible in the south-western Baltic zone (Czebreszuk 2001, 44–47, 140–142). According to him, the identification of a phenomenon as a *cultural package* (in this case the BB package) does not determine its cultural character, although it is still associated with a particular cultural content. The package set, both the objects and ideas (selected objects symbolizing an idea), is such an attractive cultural value that it spreads over large territories, but observes the rule of diffusion among societies which had somehow been connected with each other before. For this reason, it is a dynamic phenomenon, it changes on a regional scale, but preserves certain similarities. The initial version of the package is not completely copied in any region, and new local elements are incorporated in the course of diffusion. In this way, the cultural package, being subject to change in time and space, leads to transformation of only some elements of the culture associated with a given society, *e.g.*, a particular tradition in a certain group, usually leaving other aspects without material changes.

In the case of the classical (Iberian) version of the BB cultural package, objects associated with burials, apart from bone remains of individuals deposited lying on the side with bent knees, are its essential indicators. The objects include, most of all, the bell beaker, decorated with a zone or zone-metopic pattern, sometimes with other vessels decorated in a similar manner, archer's accessories, copper dagger and Palmela point, nodular bone beads with V-shaped perforations, a diadem or gold foil plaquette (*e.g.*, Garrido-Pena 2007, 1, Fig. 1). Nevertheless, due to the movement of the package in time and space, some changes appeared, *e.g.*, bell beaker-shaped goblets and mugs, sometimes without any decoration, or other previously foreign objects were deposited with the burials of the societies adopting this package. Gold lunulas, whose distribution is limited mainly to north-western Europe, are also associated with BB. Apart from that, the movement of the BB

package was associated with the conversion of burial practices from inhumation to cremation in some regions (the Lower Rhine River and Central Europe), which is obviously evidence for changes in the belief system and rituals.

Sources discovered in recent years in north-eastern Poland (Supraśl, site 3) belong to sealed assemblages connected with the BB phenomenon located furthest northeast (Wawrusiewicz et al. 2015). The eco- and artefacts from these assemblages are difficult to interpret conclusively in the context of the classical BB package, and in terms of its transformations in the course of the journey 'from neighbour to neighbour'. For this reason, the most important research issue is to establish the origin of the unearthened sources and the associated socio-cultural activity. This will also answer the question as to whether this is a case of diffusion of ideas or migration of individuals.

The area of modern north-eastern Poland, which consists of the Masurian Lake District and the North Podlachian Lowland, was still dominated by hunter-gatherer societies of the Neman Cultural Circle (NCC) in the Late Neolithic and Early Bronze Age (Manasterski 2016.16). In the Early Bronze Age they became a part of the Trzciniec cultural circle, which formed at that time. It is difficult to find a reason why these groups changed their cultural profile. The recurrent attempts to populate this region in the Neolithic, made by farming and pastoral communities, did not bring substantial changes in the traditional economic and social structure of the autochthonic populations which would be visible in archaeological material. Archaeological discoveries from the Masurian Lake District were the first to shed some light on the transformation of these local groups into Early Bronze Age societies (Manasterski 2009). However, the absence of evidence necessary for conclusive identification of 'West European immigrants' in north-

eastern Poland was a major cognitive dissonance. This big area delivered only isolated small fragments of vessels with zone-metopic decoration, which were identified with the influence of the Iwno culture (IC) – a group with a marked BB component (Manasterski 2009.74–81; 2012a; 2014). The situation changed only when features with artefacts characteristic of BB were discovered at site 3 in Supraśl in north Podlachia (Wawrusiewicz et al. 2015.23–27, Fig. 5; Manasterski 2016.12–13, Figs. 1, 2). The artefacts from that site can be regarded as critical for discussion of BB in north-eastern Poland. It is even more interesting that up to that moment the frontier of the north-eastern ecumene of this cultural phenomenon (cf. Machnik 1979b; Czebreszuk 2001.116–142, Fig. 35; Vander Linden 2004; Budziszewski, Włodarczak 2010.9–10, Fig. 25) was marked by discoveries from areas previously populated by agricultural societies (cf. Fig. 1).

Bell Beaker features from Supraśl, site 3

This multi-cultural site is situated in north-eastern Poland in the North Podlachian Lowland, in the Knyżyn Primeval Forest. It is located on a flood plain

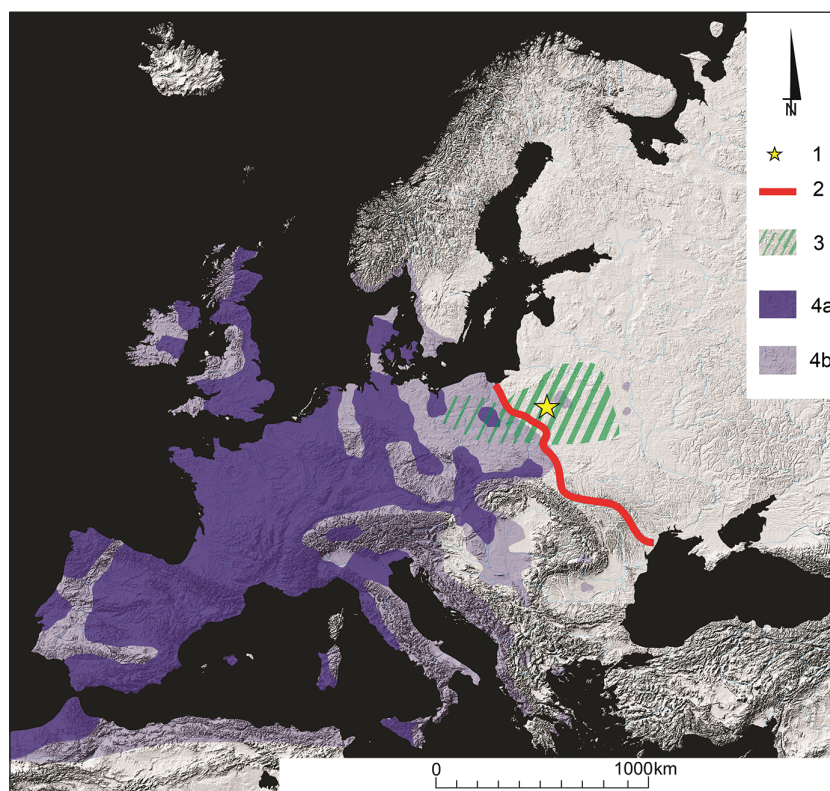


Fig. 1. Location of archaeological site in Supraśl. 1 Supraśl, site 3; 2 physico-geographical border of the West and East of Europe; 3 range of the Neman Cultural Circle; 4 range of the Bell Beaker phenomenon (4a culture, 4b peripheries); (acc. Józwiak 2003.Map 8; Wawrusiewicz et al. 2015. Fig.5; Lemerrier 2018.Figs. 1, 4).

on the right bank of the Supraśl River on an elevation which is an erosion mound of the Pleistocene river (Fig. 2). The hill where relics of pre-historic societies were unearthed is composed of sandy fluvio-glacial sediments covered with brown soil. Four features (assemblages of eco- and artefacts), clearly connected with the BB phenomenon, were found in its central, uppermost portion (Fig. 3). Their deposition, distribution and certain recurrent features indicate ‘planned behaviour’ (for the theory of see *Ajzen 2005.117–119*).

Feature 1

It was an oval concentration of eco- and artefacts, measuring approx. 90 x 120cm and displaying intentional distribution (Fig. 4; *Wawrusiewicz et al. 2015.33–90*). The assemblage consisted of: fragments of burned bones, an intact vessel and fragments of ten other vessels, two damaged amber beads, 20 flint and four stone artefacts. Two of the latter were intact and the other two fragmented.

A large undecorated pottery vessel (Fig. 4.1) was deposited in the centre, with another, also undecorated one (Fig. 4.2), inside. Next to these vessels, there was a small assemblage of fragmented and burned human bones (Fig. 4.E), weighing almost 24g in total. These remains came from two individuals (*Jaskulska 2015.249–251*). There were halves of two amber beads (Fig. 4.3,4; *Kwiatkowska 2015.325–334*) among the bone fragments. The bones and beads were most likely deposited in an organic container of a bag type (pouch?) and covered with a large fragment of a decorated vessel (Fig. 4.5). Two blade flint tools (Fig. 4.6,7) were



Fig. 2. Location of archaeological site Supraśl 3 in Supraśl River valley (photo by Damian Marczak).

found between the centrally located vessel and the bone assemblage, and slightly further away there were some small pottery fragments of several decorated vessels (Fig. 4.8–11). Four polished stone inserts (Fig. 4.12), parts of a knife/dagger blade, were discovered slightly northwest of the centre. Other objects in that location include a fragment of a bowl (Fig. 4.13) and flint artefacts – a damaged arrowhead (Fig. 4.14), a backed insert (Fig. 4.15), three splintered pieces (Fig. 4.16–18), a retouched para-blade

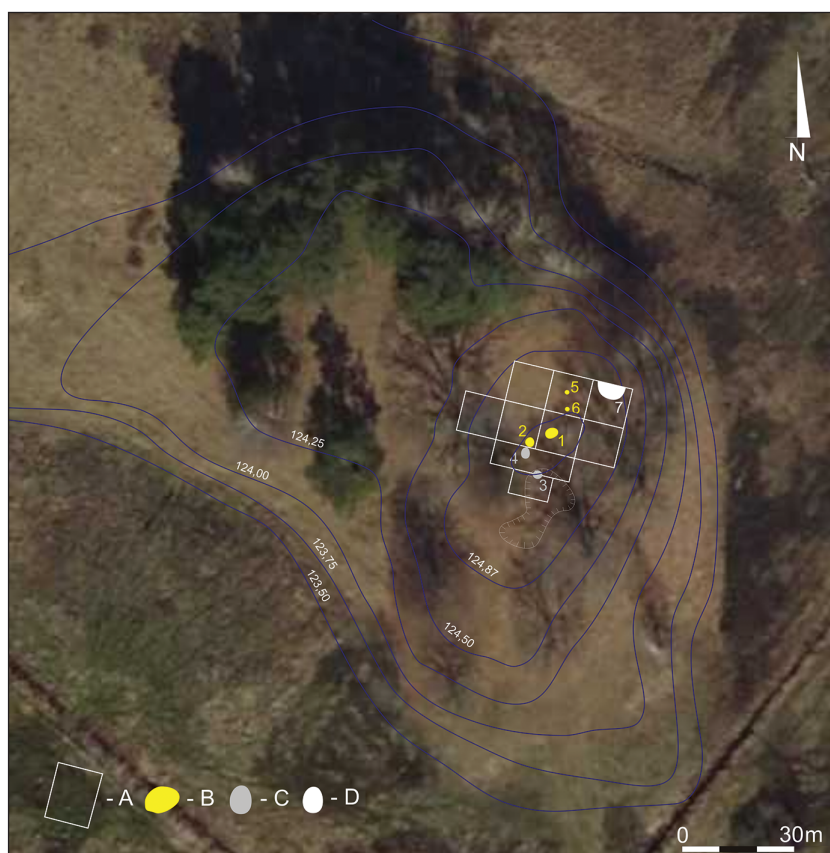


Fig. 3. Supraśl, site 3. Location of fixed features. A range of trenches; B Bell Beaker features; C Early Iron Age features; D Corded Ware culture feature (acc. Januszek et al. 2019.Fig. 2).

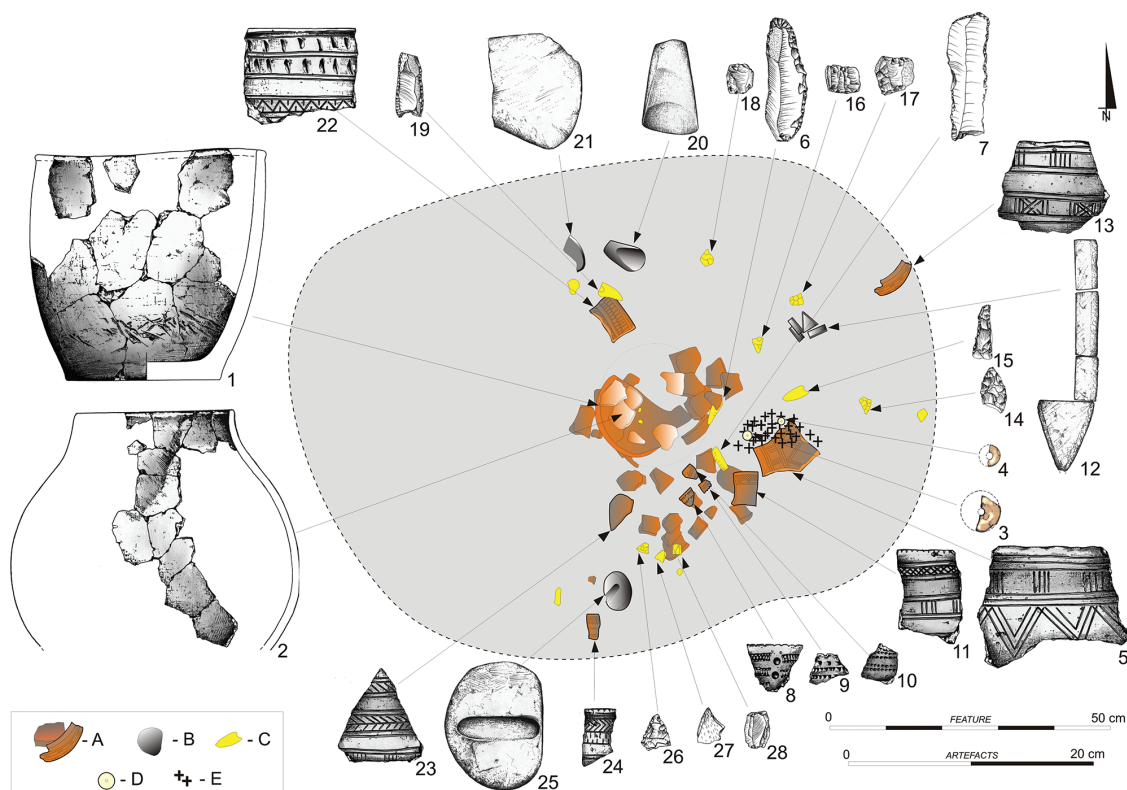


Fig. 4. *Supraśl, site 3. Generalized plan of feature 1 with location of artefacts. A shards of different pottery vessels; B stone artefacts; C flint artefacts; D fragments of amber beads; E fragments of burned bones (acc. Januszek et al. 2019.Fig. 3).*

(Fig. 4.19), as well as a stone axe (Fig. 4.20), a half of a sickle-shaped stone knife (Fig. 4.21) and a fragment of another bowl (Fig. 4.22). South of the centrally located vessel there were more shards of decorated vessels (Fig. 4.23,24), a stone arrow shaft straightener (Fig. 4.25), and flint artefacts – a broken arrowhead (Fig. 4.26), a perforator (Fig. 4.27) and a splintered piece (Fig. 4.28).

Feature 2

It was an oval darker area measuring 50 x 60cm, with eco- and artefacts inside (Fig. 5). The assemblage consisted of pottery vessels, stone and flint objects, fragments of amber beads, burned bone remains and a chunk of calcareous sinter. There was also a concentration of eco- and artefacts that had probably been deposited in a small organic container (pouch?). This group of objects consisted of pieces of burned and badly fragmented sheep or goat bones (analysed by Anna Gręzak from the Institute of Archaeology of the University of Warsaw), weighing 18g in total, four fragments of different amber beads (Fig. 5.1–4; *Manasterski, Kwiatkowska 2018.58–60, Fig. 2.3,4,7*), a decorated disc-shaped pottery object (Fig. 5.5), four shards of different decorated pottery vessels (Fig. 5.6–9), as well as eight flint artefacts – three arrowheads (Fig. 5.10–12) showing dif-

ferent types of damage, a retouched blade (Fig. 5.13), an axe-like tool (Fig. 5.14), and three splintered pieces (Fig. 5.15–17). These items were incorporated in a compact mass formed with sand and powdery soil, which differed from the soil present at the site.

The 'bag' with its contents was placed on a fragment of a large storage vessel bearing rich decoration (Fig. 5.18), together with a 'triangular' flat object with drilled perforations, which was made of slate and resembled the blade of a copper dagger (Fig. 5.19), as well as a small stone slab with an incised saltire (Fig. 5.20). All these objects were covered with a large fragment of a decorated bowl (Fig. 5.21). Close to that, there were also shards of five different decorated pottery vessels (Fig. 5.22–26), a stone axe (Fig. 5.27), an arrow shaft straightener/sharpening stone (Fig. 5.28) and a chunk of calcareous sinter (Fig. 5.29).

Feature 5

It was visible as a circular darker area of a diameter reaching almost 30cm (Fig. 6). The ceiling contained an amber pendant (Fig. 6.1; *Manasterski, Kwiatkowska 2018.59, Fig. 2.9*), with a slender stone blade (Fig. 6.2) underneath and an assemblage of 15 artefacts below. It should be emphasized that this feature contained no bone material.

The contents of the feature included nine fragments of different decorated pottery vessels (Fig. 6.3,4,6–12), a flint insert (Fig. 6.13), three flint arrowheads (Fig. 6.14–16), a stone pendant with a drilled perforation (Fig. 6.17) and a nodular item with an incised three-arm cross (Fig. 6.18). These objects, concentrated as if they had been deposited in an organic container (pouch?), were placed on a fragment of a large decorated bell beaker (Fig. 6.5). Another part of this vessel was found in feature 6.

Feature 6

It formed a circular darker area of a diameter of almost 30cm (Fig. 7). Its fill contained a concentration of eco- and artefacts, which suggests that they had been deposited in an organic container of a pouch type, just as in the case of the other features.

The contents of the ‘bag’ were deposited in the centre, on a large fragment of a decorated bell beaker (Fig. 7.1). The assemblage consisted of very frag-



Fig. 5. Suprasszl, site 3. Generalized plan of feature 2 with location of artefacts. A shards of different pottery vessels; B stone artefacts; C chunk of calcareous sinter; D concentration of eco- and artefacts (1–4 fragments of burned bones, sand and powdery soil, fragments of amber beads, 5 disc-shaped pottery object, 6–9 small shards of different pottery vessels, 10–17 flint artefacts).

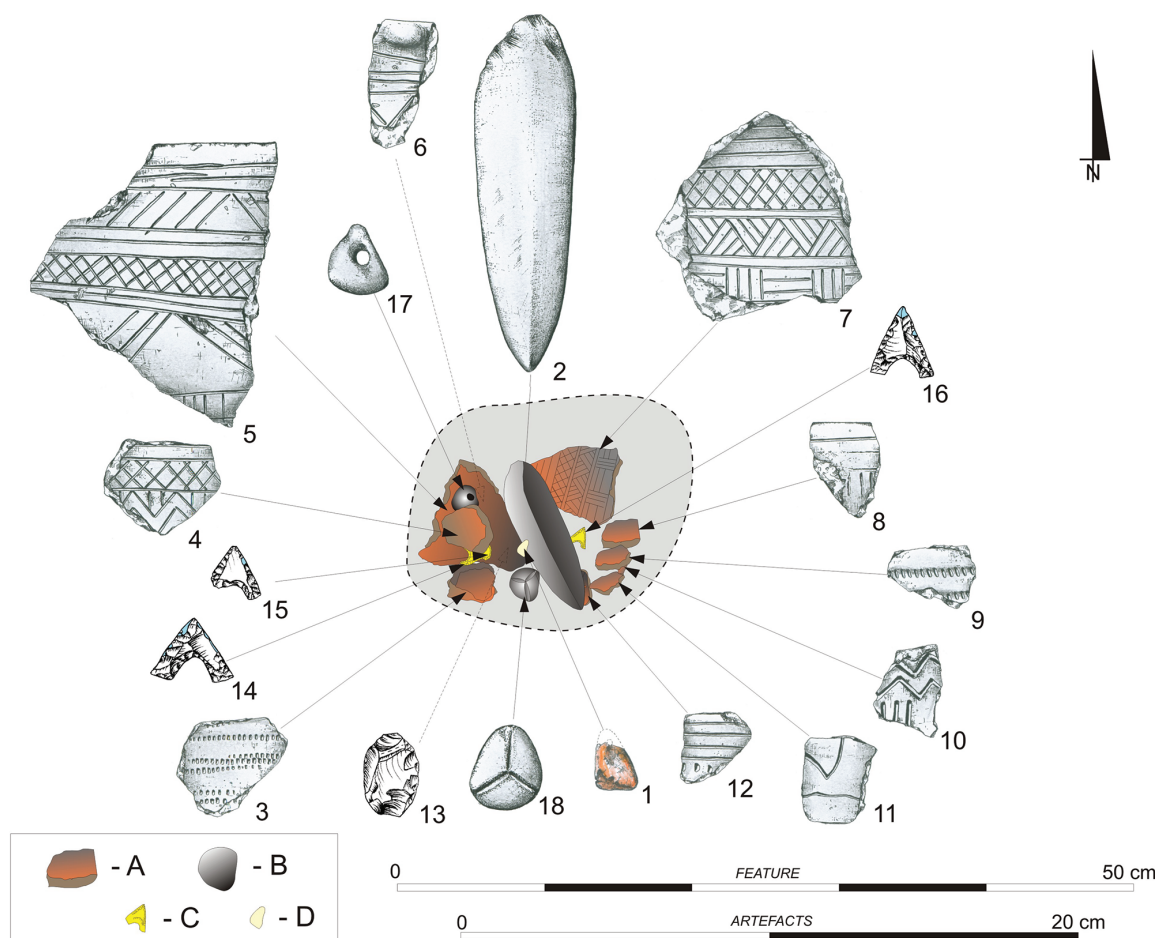


Fig. 6. *Supraśl, site 3. Generalized plan of feature 5 with location of artefacts. A shards of different pottery vessels; B stone artefacts; C flint artefacts; D amber pendant.*

mented burned human bones (analysed by Elżbieta Jaskulska of the Institute of Archaeology of the University of Warsaw), weighing 21g in total, mixed with 17 flint arrowheads (Fig. 7.2-18), a half of an amber bead (Fig. 7.19) and a decorated slate pendant (Fig. 7.20). The 'bag', deposited on the large shard of the beaker, was covered with almost a half of a bowl (Fig. 7.21). Next to the 'bag' contents there were: a sharpening stone (Fig. 7.22), a chunk of white limestone (Fig. 7.23) and a large shard of a beaker (Fig. 7.24), another part of which was found in feature 5.

Chronology and cultural identification of the discovered objects

Apart from burned bones and some carbon deposit in one of the vessels, no organic substances which could be used for absolute dating were preserved in the features due to the sandy and light soil. In the case of the bones, the radio-carbon dating was unsuccessful because of their small amount and absence of collagen. However, the radio-carbon analysis of the car-

bon deposit from a bowl fragment from feature 6 delivered a date: (Poz-116826) 5110 ± 35 cal BP (95.4% probability: 3976-3799 cal BC). This cannot be accepted as it comes from a vessel typical of BB, but precedes the emergence of this cultural phenomenon by a millennium. Apart from the vessel shards, which became the basis for establishing the chronology, no other artefacts found in the context bear diagnostic elements which would indicate the time of formation of the analysed features. Nevertheless, they are helpful for identification of other cultural components than BB, which also contributed to the making of the ritual relics of the societies that left these features.

Pottery

In addition to vessel shards displaying components of the general European BB style, the group consisted of others which diverge from this canon. Analysis of their elements made it possible to indicate potential locations of their origin. It should be stressed, however, that the results of petrographic analyses of the pottery suggest a likely import of the

pattern of pottery tradition, and not of already made vessels (*Krajcarz, Manasterski 2015*).

On one hand, they include forms with parallels in the *Cienpozuelos* style – typical of the Iberian Peninsula. Vessels in this category are characterized by geometric decoration distributed in zone and zone-metopic patterns, made by incision or stamping (Figs. 4.5; 5.5,18,21,25,26; 6.5,7; 7.1,21,24). The decoration was made mainly on the outer surfaces, and sometimes on the rims and inner portions around the rim. The motifs include lines around the circumference of the vessel, diagonal criss-cross pattern, zigzags, bands of short diagonal lines, sometimes arranged in a herringbone pattern, triangles filled with short lines and concentric triangles, as well as groups of short vertical lines alternating with undecorated areas. In one case, the decoration was discovered on the bottom of a fragment of a semi-spher-

ical bowl – it is a solar motif and extends towards the top of the vessel (Fig. 7.21). The carbon deposit from this vessel was used for radio-carbon dating and delivered the date mentioned above. It could be supposed that a small pottery object from feature 2 (Fig. 5.5) with a similar decoration pattern is a nodular bottom of another, possibly miniature vessel.

Another group consists of vessels which, apart from elements typical of general BB components, displayed other elements, characteristic for places of local innovations. One of the most interesting specimens in this group is a fragment of a decorated bowl with an incised zone-metopic pattern of the saltire motif (Fig. 4.13), which originated in the area east of the Rhine River and is usually associated with the *Veluwe* type (*Wawrusiewicz et al. 2015.53–54*). Another interesting item is a fragment of a profiled bowl with a wide mouth, decorated with an incised criss-cross

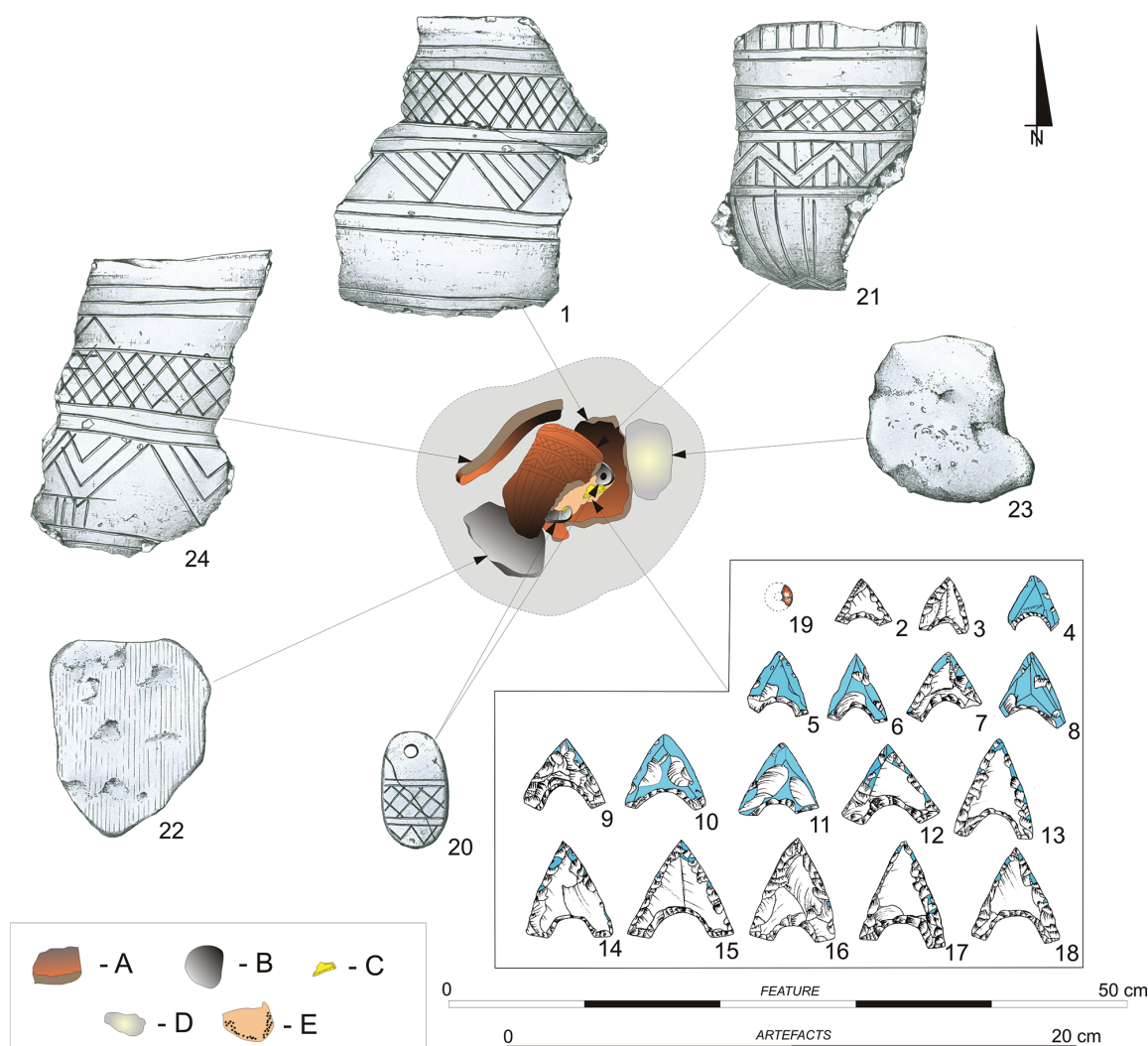


Fig. 7. Supraśl, site 3. Generalized plan of feature 6 with location of artefacts. A shards of different pottery vessels; B stone artefacts; C flint artefacts; D chunk of white limestone; E concentration of eco- and artefacts: fragments of burned bones, sand; 2–18 flint arrowheads; 19 fragment of amber ornament.

pattern on the rim, below which a zone-metopic decoration was made with the same technique (Fig. 5.23). Two decoration zones were made on the outer surface – horizontal cord impressions in the upper part, with a band of incised criss-cross pattern below. Due to its form and style, the bowl has parallels in the south-western BB zone, where the cord motifs are found together with motifs incised or impressed with a comb (*cf. Harrison 1977.13ff*). Cord decoration was made in the upper portion of the vessels, sometimes on the inner surface just below the rim, and the pottery was characterized by a red-brown or reddish colour, which fully corresponds with the specimen in question. However, cord impressions are regarded as foreign in Western Europe and associated with the influence of the Corded Ware culture (CWC) (from another perspective, as one of the results of the *Rückstromm*). Whole it is the only specimen of pottery decorated in this manner which has been found in Podlachia, a few vessels decorated in a similar way (*Manasterski 2016.57, 68–69, Fig. 12.1, Fig. 20.2–3*) have been discovered in north-eastern Poland – in the Masurian Lake District, where CWC and BB materials have also been unearthed (*Manasterski 2009.67–81*). Therefore, it is possible that the vessel from Supraśl was made in the area of the Masurian Lake District.

Large fragments of S-shaped vessels are another two examples. Apart from the typical BB decoration in a zone-metopic pattern, they are characterized by the presence of cordons and nodules. Both were deposited in feature 2. One has a large nodular handle placed below the rim (Fig. 5.18), and the other a cordon around the circumference in the place where the neck meets the body of the vessel (Fig. 5.26). Such elements are relatively rare in the archetypal BB pottery, and were usually fixed on undecorated vessels found in settlement contexts (*Prieto Martinez 2013*). However, after diffusion of this cultural phenomenon over considerable portions of Western and Central Europe, local components were absorbed, including cordons and nodules, which were absent in initial pottery forms (*Besse 2004*). For this reason, it is difficult to conclude where these two types of vessels originated. In addition, it can be assumed that they might have been made in north-eastern Poland, as parallel nodules below rims are known from the Rzucewo culture (RC) (*cf. Machnik 1979a.369–372*), which occupied south-eastern coastal Baltic areas. In this region, at a settlement at Suchacz, apart from local vessels with nodules and cordons (*Ehrlich 1936.64–70*), shards of BB vessels were found along with pottery displaying mixed BB

and RC features (*Manasterski 2012b; 2016.90–92*). S-shaped vessels from the nearby Mazovian Lowland, decorated with incised zone-metopic motifs separated with a cordon situated in the area where the neck meets the body of the vessel (*Manasterski 2016.132, Fig. 42*), seem to be an example of a parallel but probably slightly more recent phenomenon. This is even more likely because some, although relatively few, fragments of BB vessels were identified in this region (*Manasterski 2016.83–90*).

Accessories of an archer-warrior

Arrowheads

The analysed features contained 25 flint arrowheads (Figs. 4.14,26; 5.10–12; 6.14–16; 7.2–18) in total, five of which had been damaged (Figs. 4.14,26; 5.11; 6.15; 7.7) before their deposition. All the specimens are triangular and made of flakes, and represent three morphological types characterized by the shape of the notch at the base: arched, triangular, or semi-circular. One was formed with bifacial retouch (Fig. 5.12), most with retouch around the edge. Twenty-one specimens have polished edges (Figs. 4.26; 5.10,11; 6.14–16; 7.4–18), which are rare, and among them six have polished surfaces (Figs. 7.4–6,8,10,11).

Apart from the form with bifacial retouch and a triangular notch at the base, characteristic for CWC (*e.g., Włodarczak 2008.Fig. 2.37,40*), the arrowheads can be classified as typical of BB, and at the same time atypical because of the polishing marks (*Januszek et al. 2019.508–509*). In the BB package, arrowheads show variety in terms of morphology and presence of characteristic regional modifications. For instance, arrowheads with tangs are the most typical variety in the Atlantic region of Europe, while specimens with a notch at the base (hollow-based type) are the prevalent type in Central Europe (*e.g., Case 2004.28; Bailly 2014.358–362*). For this reason, it is the shape of the arrowheads with a semi-circular notch rather than the technique of making that is the criterion used to indicate the closest parallels in a few regions of the European range of BB. Such artefacts have been found in the Czech Republic and south-western Norway (*cf. Kopacz 2012.Fig. 5.4,5,13; Prescott, Glørstad 2015.Fig. 8.4.11,II,10/20*). They are also known from sites of other cultural entities with a marked share of BB, *e.g., IC* from central Poland (*Makarowicz 1989.Fig. 27.3*).

With regard to the number of deposited arrowheads in the features (2-3-3-17 respectively), feature 6 seems extraordinary as it contained 17 specimens. This

number corresponds with arrowhead assemblages from funerary contexts with the richest equipment of BB archers, such as the Amesbury archer in Britain (Harding 2011.91, Fig. 30).

Arrow shaft straighteners

Two single-element arrow shaft straighteners (Figs. 4.25; 5.28) made of different types of sandstone were discovered in features 1 and 2 (Januszek et al. 2019.509). Their supposed use for straightening reed arrow shafts was confirmed experimentally (cf. Dmochowski 2015). Both specimens bear marks indicating their additional functions. One of them, with a polished surface of a portion of its circumference, was also a sharpening stone, the other, with marked crushed areas, additionally served as an anvil. These features have parallels in morphologically similar artefacts associated with various Eurasian cultural contexts connected with at least 60 archaeological cultures spanning from the Mesolithic to the Early Bronze Age, that is, from the 9th to the beginning of the 2nd millennium BC (cf. Usacheva 2016.590, Fig. 1.3, 17, 20, Fig. 2.1, Fig. 3.11, Fig. 4). In most cases, the straightening of reed was the primary but not the only function of these tools (Usacheva 2016.602). However, such forms from BB contexts have not been published. The only known BB specimens are composed of two elements, but even this type is not a common find (e.g., Budziszewski, Włodarczak 2010.52, Pl. VI.5–5, 5–6).

Daggers/knives

Four fully polished stone artefacts correspond with the morphology of knives/daggers. They are all characterized by very good quality, particularly the accuracy of shaping, but they represent four different types. Three of them are forms with unsegmented blades and the fourth is a segmented one. One of them, preserved intact, is actually the back portion of a blade made of amphibolite (Fig. 4.21; Wawrusiewicz et al. 2015.72, Fig. 37). Another is an intact triangular blade made of slate (Fig. 5.19; Manasterski 2016.Fig. 31.6). The third has a slender lancet-shaped amphibolite blade (Fig. 6.2). Inserts of the fourth one (segmented specimen) were made of granite gneiss (Fig. 4.12; Wawrusiewicz et al. 2015.73, Fig. 39). None of the artefacts has direct parallels in published pre-historic material, and thus they are the first in BB contexts. Since rocks from the Fennoscandian Shield, possibly sourced in Scandinavia, were used for their production and the specimens were made with a high degree of accuracy, they might have originated in some societies from Northern Europe. However, the raw material might

have also represented glacial erratic rock connected with the most recent glacial period.

Stone and flint tools

Stone artefacts

Each feature contained rather sparse tools, made of various rocks identified on the basis of petrographic analysis by Maciej T. Krajcarz from the Institute of Geological Sciences of the Polish Academy of Sciences in Warsaw. These artefacts include: an orthoamphibolite adze (Fig. 4.20), an amphibolite axe (Fig. 5.27) and a polishing pad/sharpening stone made of Jotnian sandstone (Fig. 7.22). Apart from the polishing pad/sharpening stone with low diagnostic value, the other tools correspond with common forms found at relatively close sites of Late Neolithic cultural entities of the south-eastern coastal regions of the Baltic Sea (e.g., Šventoji 6 in Lithuania – cf. Rimantiene 2005.Abb. 262). Other parallels were discovered in the Masurian Lake District, although they were only partially preserved (Manasterski 2009.97–101). Apart from that, axe-like tools of various forms and dimensions, made of different rocks, are known from many other regions situated within the range of BB. In the case of the artefacts from Supraśl, it should be emphasized that the rock material used for their production is common in north-eastern Poland in post-glacial sediments, but also has natural outcrops in various European regions, including Scandinavia. For this reason, the provenance of the raw material cannot be conclusively indicated.

Flint artefacts

The raw material used for production of these artefacts were two varieties of erratic chalk flint. One of them is local, the other, defined as ‘Pomeranian flint’, is not found in Podlachia. The specimens made of the former include, among others, four blade tools (Figs. 4.6, 7, 19; 5.13), two of which are knives for cutting meat with bone (Fig. 4.6, 7), another is associated with skin processing (Fig. 4.19; cf. Pyżewicz 2015.298–300). Others are flake forms (a perforator and two inserts) without any marks of use. The forms made of Pomeranian flint include seven splintered pieces (Figs. 4.16–18, 28; 5.15–17) and a polished axe-like tool (Fig. 5.14), probably used for cutting wood (according to an unpublished use and wear analysis by Katarzyna Pyżewicz from the Institute of Archaeology of Adam Mickiewicz University in Poznań). Specimens made of this raw material have parallels at RC sites located in the south-eastern coastal region of the Baltic Sea (cf. Januszek 2010.72–74; Kabaciński 2018.155, Figs. 3, 4). How-

ever, splintered pieces made of Pomeranian flint were identified much closer to Supraśl, at Ząbie site in the Masurian Lake District, where pottery bearing BB features was also unearthed (*Manasterski 2009. 102–104, Pls. 10.7–8, 12.56, 13.9*). Splintered pieces are virtually absent from other Polish sites with the BB phenomenon – only one specimen was discovered at Świącice in Lesser Poland (*Budziszewski, Włodarczak 2010.59*). South-eastern France is an area where they are commonly found at settlement sites (*Furestier 2004.84*).

Jewellery

Amber jewellery

The features contained eight artefacts made of succinite (Baltic amber), seven of which were fragments of six different cylindrical beads (Figs. 4.3,4; 5.1–3; 7.19) and a nodular one with a V-shaped perforation (Fig. 5.4), and the eighth one is a trapezoid pendant (Fig. 6.1), which was damaged in its upper part in the course of excavations (*Manasterski, Kwiatkowska 2018.57–59*). Apart from the latter, the patina which covered their surfaces indicates that the specimens were broken and deposited in the same form as the one in which they were unearthed.

Cylindrical amber beads are known from BB contexts, but their territorial range is basically limited to the British Isles (*Manasterski 2016.104–105*). The nodular bead is a form which can be found in BB burials in the Czech Republic (*e.g., Hájek 1957. 398–421; Czebreszuk 2011.41–43*). As opposed to the beads, the pendant was made of a natural chunk of amber and was only minimally processed to alter its shape and drill a hole in it. Parallel pendants are not known from BB contexts, but are associated with local societies from the Late Neolithic and Early Bronze Age occupying the Vistula and Oder Rivers basins (*cf. Bukowski 2002.15, 25, 32, 33, 35, Figs. 11a, 20, 21*).

The processing marks visible on the surfaces under microscope as well as comparative and experimental research indicate that metal tools (a drill and a 'knife'), made of copper or copper alloy, were used in the production process (*cf. Popkiewicz 2016. 60*). Since no traces of the use of such tools from the Late Neolithic and Early Bronze Age have been found at amber-processing 'workshops' on Baltic coasts, it should be assumed that these artefacts originated in other areas of production. Available data suggest that in this period corresponding 'jeweller's' tools were used in the British Isles and the area of the Aegean

Sea (*Mazurowski 1983.113*). Considering other arguments, connected with the context of the analysed amber artefacts, their origin might be found in 'jeweller' traditions of the British Isles. Nevertheless, it does not mean that they were made there as they might as well be the products of an incomer.

Stone jewelry

These artefacts include two pendants made of different raw materials. One of them is a mudstone pebble turned into jewellery by drilling a perforation in it (Fig. 6.17). The other is a broken oval plaquette-like form made of slate and has surfaces covered with decoration (Fig. 7.20), whose motifs correspond with the ones found on pottery. It shows a surprising similarity to geometric plaquettes from the southwestern part of the Iberian Peninsula, dated to 3500–2750 cal BC (*Garcia Rivero, O'Brien 2014.1*). Some researchers regard them as representations of the Mother Goddess (*Almagro Gorbea 1973; Rodrigues 1986a; 1986b; Gonçalves 1999*). Others believe these plaquettes express 'collective heraldry' understood as lineage identifiers, which were used as an ordered and important system for transmission of information (*Lisboa 1985; Bueno Ramírez 1992; Lillios 2002*). The latter group also emphasizes their significance in funerary rituals. However, a phylogenetic analysis recently conducted by Daniel García Rivero and Michael J. O'Brien showed that such plaquettes cannot be genealogical systems for recording generations (*Garcia Rivero, O'Brien 2014.12–17*). They also concluded that these artefacts might have had a common origin in terms of concepts, *e.g.*, religious or apotropaic ones, and their variety was connected with different developments from the initial idea, which resulted in many variable elements, that is, mutations and variants.

Artefacts and ecofacts with arbitrary meanings

These include two objects made of different types of sandstone, two fragments of white rock: calcareous sinter and limestone rock, as well as some badly burned and fragmented human and animal bones. One of the artefacts is a small flat slab with an incised saltire (Fig. 5.20) and a plano-convex form made of a pebble with an incised three-arm cross on the convex surface (Fig. 6.18). Neither of these objects have parallels in BB contexts. However, they are similar to pottery tokens from the Near East, used from the 8th to the 3rd millennium BC as symbolic counting aids for particular goods or their measures, *e.g.*, for a sheep or large measure of grain (see *Schmandt-Besserat, Erard 2007.8–9, Fig. 1.2*).

The chunks of calcareous sinter and limestone rock, which were also sources of white pigment, have parallels in funerary rituals of the Late Neolithic Pit Grave culture in the area of steppes near the Black Sea, where they are found in chunks next to the deceased or as powder on skulls of men only (cf. *Woźny 2011.67*). A man covered with white marl in a burial identified with BB funerary rituals, found at Zabie in the Masurian Lake District, received a similar treatment (cf. *Manasterski et al. 2001.148*).

Burned and badly fragmented bone remains were identified in three out of the four features. Two features contained human bones and another one – sheep or goat bones. Their total weight oscillated around 20g (24g, 18g, 21g), and in the case of feature 1 they belonged to two individuals, an adult and a juvenile. On the one hand, there were very few bone remains, on the other, the presence of sheep or goat bones seems to suggest unidentified funerary rituals rather than a burial. At this stage of research it is impossible to indicate any parallels either in the whole region covered with the BB phenomenon, or in areas occupied by other European Neolithic and para-Neolithic societies.

Discussion

Considering all the data presented above, do the eco- and artefacts from Supraśl 3 reflect adoption of the BB cultural package by a group which cannot be conclusively identified in terms of its cultural affiliation? The answer is not simple. On one hand, there are only some elements of the BB culture together with other elements, which are not associated with autochthonic societies of north-eastern Poland in the Late Neolithic and Early Bronze Age. They might have been adopted ‘on the way’, which could be connected with the phenomenon of the ‘package’. However, there are no parallel discoveries from the area of broadly understood Central Europe, which would legitimize the assumption of diffusion of the BB package ‘from neighbour to neighbour’. It could thus eventually arrive north in Podlachia, even if this area is regarded as peripheral for the phenomenon and the adoption of only some elements would take place without awareness of its basic ideology (cf. *Turek 2013.9*). In the presented case, it most likely involved the arrival of a group (or groups) of BB people from the West, which brought ‘behaviour’ representing the BB cultural package. This is suggested by some of the artefacts characteristic for Western Europe, and in the case of the decorated slate plaquette/pendant, directly from the

Iberian Peninsula, the only location where it has parallels. Only after that some components of the BB package would spread, and they would be limited to the style of pottery vessels, which is reflected in sources from the final phase of NCC and the period of formation of the Trzciniec cultural circle (*Czebreszuk 2001.164–169; Manasterski 2016.131–137*). At this stage, some artefacts characteristic of late Neolithic societies from the south-eastern Baltic region were incorporated into the package. Perhaps the amber artefacts which are atypical in Podlachia were made in that Baltic region (*Manasterski, Kwiatkowska 2018*).

On the basis of the presented pottery vessels, supported with amber, flint and stone artefacts found in this context, it is possible to suggest a possible sequence of movement of elements of the package, starting from the suggested place of origin and following the route from south-western Europe to Supraśl. Thus the probable place of origin would be located in the Iberian Peninsula, which could be suggested by the pottery of the *Ciempozuelos* style and the decorated slate plaquette/pendant. Further on, the route would probably run across the La Manche area, Jutland and the Baltic Sea to its south-eastern coastal regions. Within this space, the adopted package components included: the saltire motif as well as cordons and nodules in pottery decoration, techniques of processing of amber jewellery, flint arrowheads with a semi-circular notch at the base, splintered pieces and stone tools, as well as the conversion of funerary practices from inhumation to cremation. The route then ran across the Masurian Lake District to North Podlachia, where Supraśl 3 is situated, and the movement resulted in the adoption of flint arrowheads with an arch-shaped notch at the base, cord decoration motifs in pottery, most likely due to contacts with CWC societies. However, taking Belarusian artefacts with BB features into consideration, we can get an impression that the area of Supraśl was not the frontier zone for the diffusion of this phenomenon (cf. *Czebreszuk, Kryvaltsevich 2003; Matuszewska 2004; Wawrusiewicz et al. 2015.192, 194*). Nevertheless, it might have been an area of interactions between the BB influence from the west and an influx of stimuli from the broadly understood southeast. These stimuli are manifested by the presence of eco- and artefacts which are absent from both BB contexts and from sources left by autochthonic hunter-gatherer groups (stone ‘tokens’, multi-functional reed arrow shaft straighteners, sedimentary rock in rituals).

However, the origin of the ritual involving the deposition of fragments of objects, confirmed in all the features, and its incorporation into ritual practices cannot be accounted for. This practice was applied mainly in the case of pottery and some pieces of amber jewellery, or, rather rarely, weapons. Similar acts of intentional fragmentation of artefacts (mostly pottery) deposited in burials, pits and treasure contexts are known from the Neolithic and Chalcolithic discoveries in the Balkan Peninsula (*cf. Chapman 2000. 53*).

Conclusions

Supraśl site 3 is an isolated sandy elevation situated among water-logged meadows associated with wetlands of the Supraśl River, which is now a regulated watercourse. They occupy a stretch of land which is more than a kilometre wide. The landscape in its vicinity consists of barren moraine hills covered with forests as well as lakes and ponds, mostly with peat vegetation. Palynological analysis shows that these areas were only sporadically used for farming from the Early Bronze Age to the 20th century AD (*Kuprianowicz, Szal 2015*). At the same time, they were a perfect location for the economic activity of hunter-gatherer societies, which were represented by NCC in the late 3rd and early 2nd millennium BC. For this reason, it could be surprising that BB representatives arrived in this region. The answer can be found in the analysis of the natural and archaeological context. On one hand, there existed a water communication network which served for transport and isolated artefacts with typical BB components

were found (*Wawrusiewicz et al. 2015.Fig. 101; Manasterski 2016.Fig. 2*). On the other hand, it was close to chalk flint mines located along the Ros River and flint workshops situated in the vicinity of the mines (*Gurina 1976; Wawrusiewicz et al. 2015. 190–191, Fig. 106*). All these indicate that this was most likely an attempt to find trade partners and organize communication routes or take control of the existing ones (*Wawrusiewicz et al. 2015.185–186*). For these reasons, it should not be surprising that mainly isolated BB artefacts without a clear settlement or funerary context were unearthed in north-eastern Poland. The discoveries from Supraśl 3 escape this pattern. They cannot be conclusively classified as isolated finds, settlement relics, or classic burials. Both the choice of the place (an isolated ‘island’ among wetlands, with access from the riverside, surrounded by large forests – a secret place for the initiated) and the selection of the objects in the discovered features suggest that relics of a certain form of a ritual system, most probably funerary practices, were found. This is indicated by the presence of human cremation remains identified in two features as well as sets of artefacts found in burials of BB men – archers/warriors (beakers, archer’s accessories, daggers, jewellery). The recurrence of the sets of eco- and artefacts and their arrangement in the assemblages suggest the existence of ritual traditions. Although most pottery vessels and the decorated slate plaquette/pendant may suggest their Iberian lineage, it is difficult to list parallels in terms of place and behaviour relics. This is relevant to both autochthonic and allochthonic societies occupying north-eastern Poland.

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