

Mateusz Jaeger

Fortified Settlements of the Early Bronze Age in Poland

Introduction

The dynamics of development of settlements surrounded by artificial fortifications in Bronze Age in the territory of present-day Poland reflects a general trend that is visible in other regions of Europe. The first period when relatively few fortified settlements were built was the first half of the 2nd millennium BC. However, intensification of the phenomenon of erecting fortifications around settlements can only be noticed with the development of the Urnfield cultural complex. This process concerned mainly the western, northern and southern local groups of the Lusatian culture in today's Poland. The beginning of the process of establishing fortified settlements of the Lusatian culture in the territory of Poland cannot be determined precisely. Therefore, a general timeframe of this phenomenon must be adopted, ranging from Bronze Age D to the turn of Hallstatt D and La Tène A.¹ In this period, numerous settlements enclosed by artificial fortifications were built in the aforementioned areas. From the perspective of their location in a specific landscape, their scale, the inner layout, the size and type of fortification, as well as probably their initial functions, fortified settlements in the Late Bronze Age and the Early Iron Age are very heterogeneous in character, and in addition have very different statuses of archaeological investigation.²

The older developmental stage of fortified settlements in the territory of present-day Poland is characterised by a significantly low number of sources material. The sites identified until now form a small group of settlements, clearly connected with two cultural traditions. Four settlements which have been discovered in Greater Poland and Silesia so far should be linked with the development of local groups of the Únětice culture. The fortified character and the Early Bronze Age chronology

of two other sites in Greater Poland (Słopanowo, Pudliszki), as proposed in older literature on the subject, have been verified negatively.³ In south-eastern Poland, in the Polish part of the Western Carpathians, there are three known sites, which were the result of the northern development of settlement of the Otomani-Füzesabony culture, as well as the development of local communities of the Mierzanowice culture. Both groups of Early Bronze Age fortified settlements will be discussed separately here, taking into consideration the available information concerning their inner layout, form of fortifications and chronology. Thus collected information will also serve an attempt to locate the fortified settlements discussed in wider contexts regarding the roles which are most frequently assigned to the settlements of this kind. These sites are readily referred to as centres of exchange, trade and crafts. They are regarded as evidence of a dynamic hierarchy in communities of the Early Bronze Age. Finally, they are also frequently linked with military and defensive significance and functions. However, specific sources are not always considered in this regard; the claims are much more frequently based on general knowledge, which in many cases may be inconsistent with specific examples of fortified settlements.

Fortified Settlements in Greater Poland and Silesia

As mentioned above, only four examples of fortified settlements, the establishment and function of which can be connected with the development of Únětice culture settlements in Greater Poland (Bruszczewo) and Silesia (Radłowice, Nowa Cerekwia, Jędrychowice), have been investigated so far (**Fig. 1**). While the cultural and chronological attribution of the sites of Bruszczewo and Radłowice has never raised any doubts, the settlements

¹ Puziuk 2010, 6.

² Niesiołowska-Wędzka 1974; Janiak 2003; Puziuk 2010.

³ Jaeger 2010a.

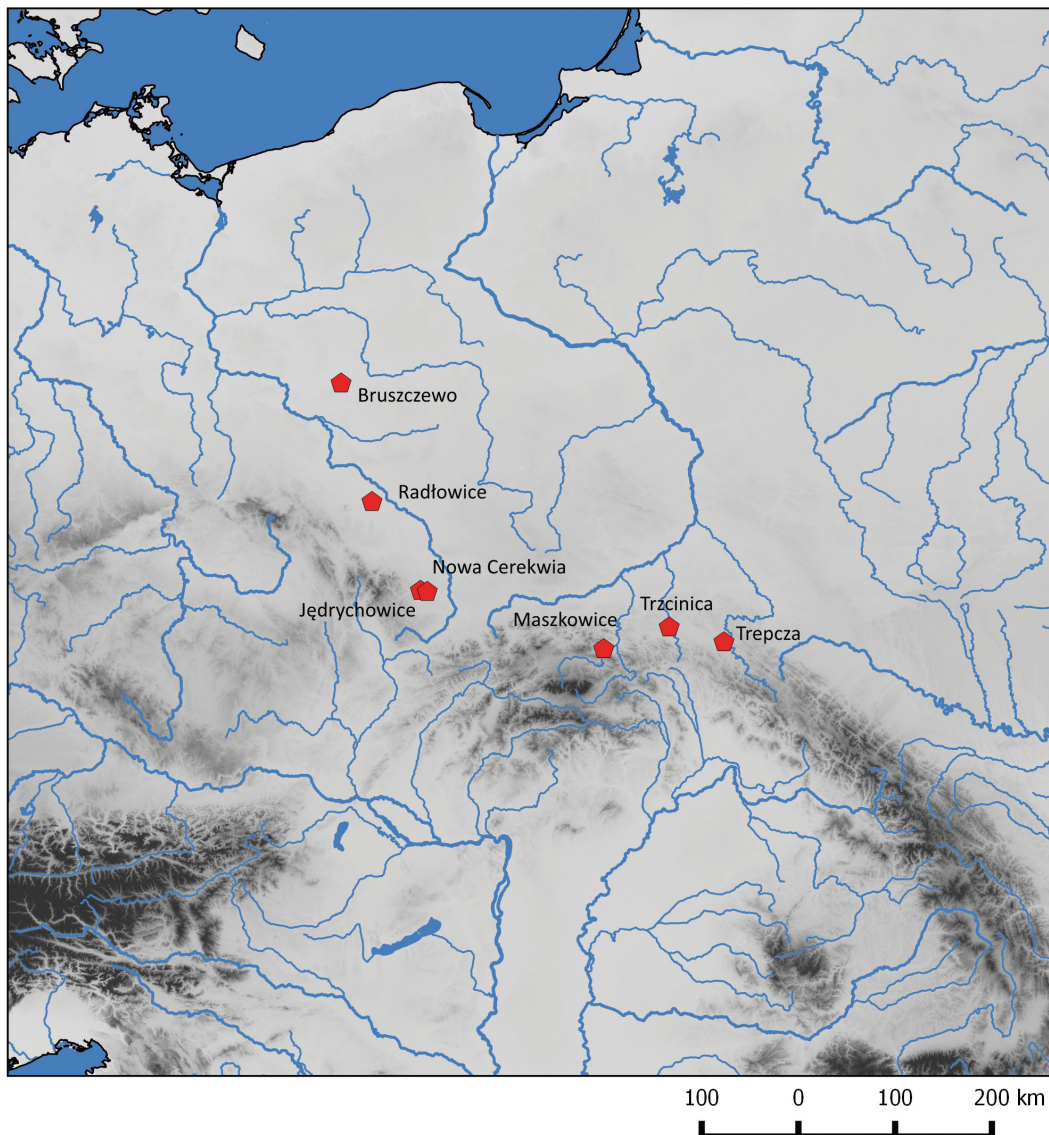


Fig. 1 Distribution of Early Bronze Age Fortified Settlements in Poland (graphics by M. Stróżyk)

in Jędrychowice and Nowa Cerekwia, for several decades basing on the initial excavations and publications, have been linked to a local group referred to as the “Nowa Cerekwia group”. This group was understood as a characteristic combination of Únětice and Maďarovce/Věteřov features and regarded as an element of the larger Maďarovce-Věteřov-Böheimkirchen cultural complex.⁴ The establishment of fortified settlements was supposedly the effect of an external cultural impact (also understood as population migrations).⁵ At present, in light of radiocarbon dating and re-analysis of pottery stylistic, these sites have been linked with the local development of Únětice culture communities.⁶

⁴ Gedl 1964, 51; 1985.

⁵ Niesiołowska-Wędzka 1980, 35.

⁶ Molak 2008; 2010.

Inner Layout

In the case of Únětice settlements in the territory of present-day Poland, most information concerning the inner layout was definitively obtained from research on the settlements in Bruszczewo and Radłowice. The site in Bruszczewo has been an arable field for decades. Long years of ploughing, including particularly deep and destructive steam-engine ploughing in the 19th century and other agrotechnical measures resulted in great destruction of strata from the Early Bronze Age. The magnitude of this problem may be illustrated by the fact that only in one trench (47/05) a cultural layer linked to the Únětice settlement has survived in fragments.⁷ Next to contemporary destructive

⁷ Czebreszuk/Suchowska 2010, 545 Fig. 2.

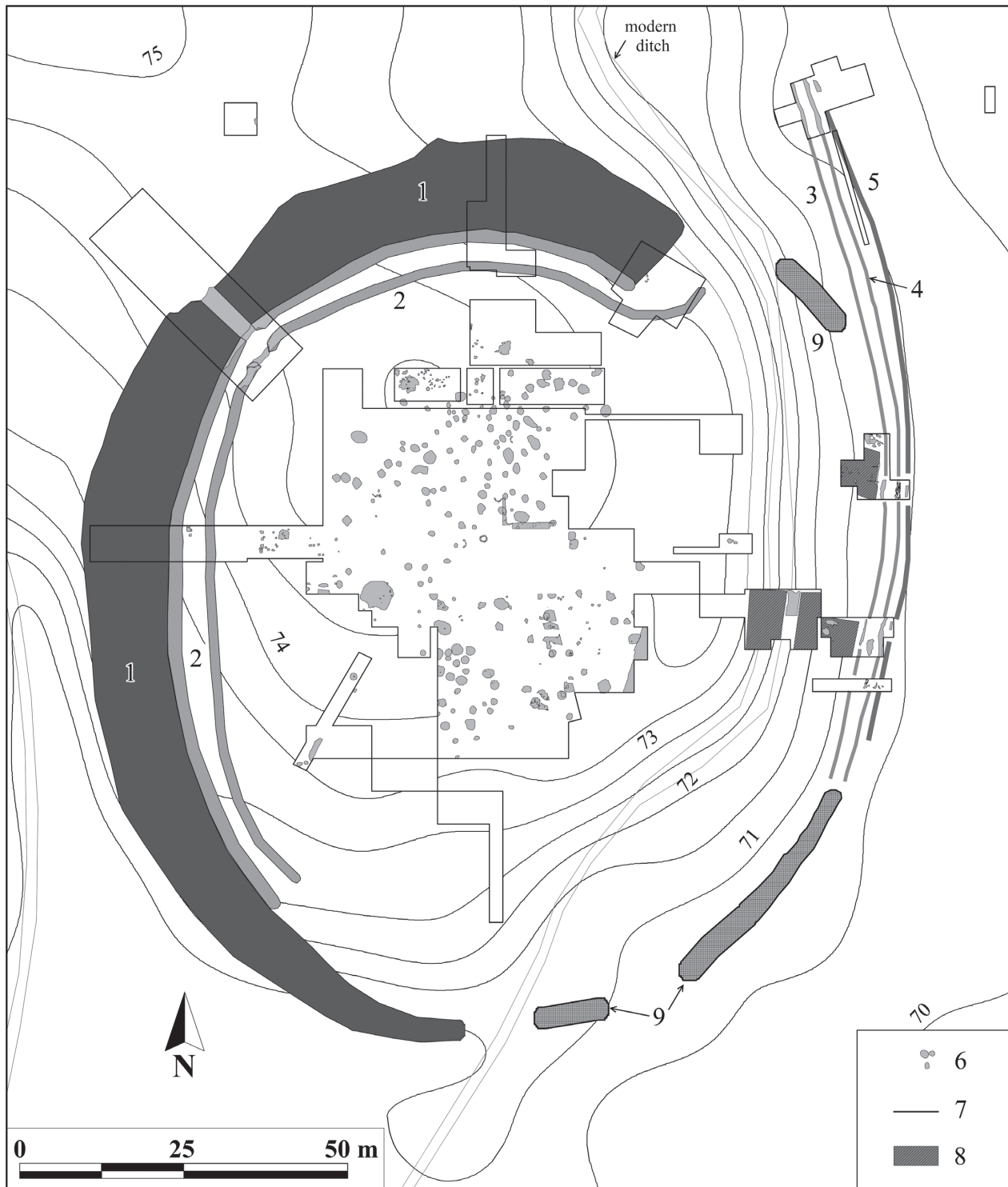


Fig. 2 Bruszczewo. Plan of the settlement with excavated elements of the inner layout and fortifications: 1 ditch; 2 palisades; 3–4 fascines; 5 wooden wall; 6 pits; 7 excavated area; 8 houses in wet area; 9 probable course of Early Bronze Age ditch (after Jaeger 2016a)

processes, some elements of the Early Bronze Age settlement must have been destroyed during the younger phases of the site's use.

In consequence, little data is available on the inner layout of the Bruszczewo settlement.⁸ What was nevertheless recorded is a large number of

storage pits and postholes (**Fig. 2**).⁹ In addition, excavations and geomagnetic investigations support the view that between the most densely settled part of the settlement and the fortifications there was an empty space of ca. 20 meters in width.¹⁰

⁸ Müller/Kneisel 2010, 762.

⁹ Czebreszuk *et al.* 2004a, 73; Kneisel 2010, 94 Fig. 1.

¹⁰ Czebreszuk *et al.* 2004a, 73.



Fig. 3 Bruszczewo. Hypothetical reconstruction of building (feature no. 78) (after Stróżyk 2015)

Certainly, some of the postholes must be relics of Early Bronze Age post houses. What is not certain, however, is their chronology. For the most part, these features lack any archaeological artefacts that would allow researchers to attribute them to a specific period of Bruszczewo's habitation.¹¹ The arrangement of the postholes revealed in the course of excavations is insufficient to reconstruct unequivocally the remains of huts. Quite possibly, some postholes that are regularly arranged along an East-West axis are relics of Early Bronze Age structures.¹² How the huts looked we can presume only indirectly by relying on information from other sites with a similar chronology.

In the case of sites located in Poland, our knowledge is extremely modest due to the absence of large-scale planned excavations.¹³ The majority of Early Bronze Age settlements was only partially investigated, often as part of excavations of multi-cultural sites. They yielded above all discoveries of different types of pits and postholes. In several cases, features of exceptionally large size were interpreted as the remains of dwelling structures – “semi-dugouts”.¹⁴ Post huts were small structures

measuring from 9 to 25 m² and may have had a similar form like hut remains known from Germany and Moravia, about which more is known.¹⁵ In Moravia, four types of post houses occurring in Early Bronze Age settlements were distinguished: small above-ground houses, houses sunk into the ground, hall houses and circular ones.¹⁶ At the site of Bruszczewo, a circular arrangement of postholes within a relatively small area, which is typical of houses built on a circular plan, was not found in any of the investigated settlement parts (see Velešovice).¹⁷ Neither are there any regularly spaced postholes, typical of hall structures (see Šumice).¹⁸ It can be tentatively assumed that instead small above-ground post houses provided shelter to the settlement's inhabitants. Such structures are known from many Únětice culture sites in Moravia (e.g. Sedlec, Holubice, Moravská Nová Ves).¹⁹

Next to postholes, the mineral soils in Bruszczewo settlement yielded a single feature which is probably the relic of a house built sunken into the ground. Feature 78, only partially explored, was

¹¹ Czebreszuk *et al.* 2004a, 74.

¹² Czebreszuk *et al.* 2004a, 74 Fig. 28.

¹³ Sarnowska 1969, 16; Butent-Stefaniak 1997, 166–171; Lasak 2001, 249–253.

¹⁴ Sarnowska 1969, 14; Butent-Stefaniak 1997, 167.

¹⁵ Stuchlík 2000, 221–229; Schefzik 2006, 154–155 Figs. 11–12.

¹⁶ Stuchlík 2000.

¹⁷ Stuchlík 2000, 237 Fig. 13.

¹⁸ Stuchlík/Stuchlíková 1999, 178 Fig. 8 (Eching/Öberau type); Schefzik 2006, 140 Fig. 1.

¹⁹ Stuchlík 2000, 224–226 Figs. 3–6.



Fig. 4 Bruszczevo. Construction detail of possible hut no. 2 remains (after Kneisel *et al.* 2008)

trapezoidal in shape, measured 4.4 m in length and 2.4 to approx. 4 m in width, and had a stone hearth.²⁰ Dwelling features partially sunk into the ground are known from other Únětice culture settlements.²¹ However, feature 78 differs significantly from huts described by these quoted authors: in both Radłowice and Moravian Budkovice, postholes were recorded with structural elements of houses.²² Moreover, feature 29 in Radłowice yielded daub fragments bearing twig impressions, showing the way in which the walls had been built.²³ By contrast, in Bruszczevo no postholes were found that related to feature 78. Perhaps an explanation should be sought in another type of structure used to build the house (log structure?) (Fig. 3).²⁴

Owing to the specific conditions prevailing in Bruszczevo's peat layers, which fostered the preservation of organic materials, numerous elements of wooden architecture survived at the site. Aside from two fascines and a wooden wall in the oxygen-free environment, discoveries were made of fragments of structural elements of buildings, possibly of dwelling character. Excavation of peat layers calls for a specific methodology. One of its more important precepts is that the trench size be

kept rather small.²⁵ For this reason, the structural elements of houses described below, situated at the shoreline of the original lake, have been explored only in part. In total, fragmentary elements of four wooden structures were discovered and interpreted as the remains of huts.

The first structure was unearthed in trench 30. It was situated west of an inner wattle and consisted of a cluster of 26 piles, which had been halved. The structure was accompanied by the remains of a hearth.²⁶ A second structure in trench 31 could be seen in the geomagnetic plan as a roughly rectangular anomaly.²⁷ Located north of the afore-described structure, its elements were uncovered simultaneously in two quadrats (5 and 7).²⁸ These were two perpendicular and two longitudinal beams. The end of one of the beams was secured with large stones. An unusual detail could be recorded in this structure: namely, one of the beams was placed on piles which were mortised in purpose-made openings in the beam (Fig. 4).²⁹ Noted between the beams were birch bark, clay and twigs, which must have been the remains of a floor.³⁰ West of the first structure in trench 30, in the

²⁰ Czebreszuk *et al.* 2004a, 75 Fig. 29.

²¹ Lasak 1988, 48; Stuchlík 2000, 235–236.

²² Lasak 1988, 48; Stuchlík 2000, 236 Fig. 12.

²³ Lasak 1988, 48.

²⁴ Stróżyk 2015, 393.

²⁵ Kneisel 2010, 140.

²⁶ Kneisel *et al.* 2008, 157. 162; Kneisel 2010, 104.

²⁷ Ducke/Müller 2004, 63 Fig. 23.

²⁸ Kneisel 2010, 115 Fig. 24.

²⁹ Kneisel 2010, 118 Fig. 32.

³⁰ Kneisel *et al.* 2008, 162; Kneisel 2010, 126.

area between the mineral soils and peat zones of the site, the poorly preserved remains of a third structure were unearthed. What was left included a single massive post, a large number of postholes with a small-diameter, and the so-called “shadows” left behind by the wood that had rotted away in the mineral layer.³¹ The remains of the last (fourth) house were discovered in trench 52 (quadrat 11), located on the slope of the promontory and joining both zones of the site. Only part of the house was explored including the remains of a collapsed wall in the form of layers of burnt and unburnt clay.³² Found close to the house was a large deposit of charred grain.³³ Additionally, quadrat 8 in trench 31 yielded a characteristic concentration of small twigs. It is quite probable that these are remains of a destroyed wattle wall or fence.³⁴

While discussing the inner layout of the settlement, it is worth noting that the only grave discovered in Bruszczewo until now was located a short distance from the above structures. Uncovered in quadrat 2 was the grave of a male wrapped in a willow twig mat.³⁵ The current knowledge about the layout in this part of the site suggests that here we are dealing with a burial within the settlement bounds. In Poland, we know of examples of the co-occurrence of graves and economic features of Únětice culture sites (e.g. Wrocław-Oporów, Domasław).³⁶ This way of burying the deceased – by placing them in graves dug in an inhabited area or in utility pits – is not an exception in Únětice communities. Numerous burials within settlements are known from other areas of intense settlement of this culture (Germany and Czech Republic). In the territory of present-day Germany, their high share (25%) among all known Únětice burials demonstrates that it was one of the ways of treating the bodies of deceased persons.³⁷ The frequently noted human burials in storage pits and in proper graves in the area of settlements in the territory of present-day Czech Republic should be interpreted similarly.³⁸

Summing up, it is quite clear that the state of preservation of the mineral soils in Bruszczewo settlement largely prevents any reconstruction of houses. Nevertheless, it can be tentatively assumed that mainly small post huts were built within the settlement bounds. In one case, there is evidence for another type of structure: a hut partially sunk into the ground, possibly built of logs. Fortunately, specific data were supplied by the peat zone of the site. Relying on them, it can now be claimed with certainty that buildings stood along the shoreline of the original lake, some of which were dwelling structures.

In case of the settlement in Radłowice, the excavation research covered an area of approx. 1000 m². As a result, numerous remains of internal structures within the settlements were recorded. These included: five semi-dugouts, remains of at least nine above-ground houses, post houses, more than 100 postholes (partly connected with the reconstructed buildings) and more than 200 holes – remains of different kinds of unspecified timber structures.³⁹ All buildings were located in close proximity of each other, oriented with the longer axis on North-East-South-West or North-West-South-East line. The preserved buildings probably demonstrate various stages of Early Bronze Age structures; however, the unambiguous superposition of two outlines of post huts, oriented in different directions, was recorded only in one case (H/1 and I/2 buildings) (**Fig. 5**). Some of the unearthed buildings probably had walls reinforced with clay, which is evidenced by the fragments of pluggings with imprints of timber structural components.⁴⁰ Two groups of different sizes were distinguished among the structures sunk into the ground. The group of larger structures includes semi-dugouts from 4 to 8 m in length and up to 5 m in width. Their approximate outline was elongated oval, and they were sunk into the ground at 0.25–0.30 m on the average (maximum depth 0.50 m). In a number of structures of this type, in their lower parts, additional small pits were discovered, which were probably used for storage.⁴¹ Smaller underground structures, probably having various economic functions, were usually up to 2 m in length and from 0.50 m to 1.50 m in length, and their outlines were approximately oval or rectangular with

³¹ Kneisel *et al.* 2008, 163.

³² Kneisel 2010, 137–138 Fig. 64.

³³ Kneisel *et al.* 2008, 163.

³⁴ Kneisel *et al.* 2008, 162 Fig. 6; Kneisel 2010, 128–130 Fig. 51.

³⁵ Jaeger 2012a.

³⁶ Sarnowska 1969, 226; Butent-Stefaniak 1997, 169–170.

³⁷ Knipper *et al.* 2015.

³⁸ Langová/Danielisová 2013.

³⁹ Lasak 1993, 71; Lasak/Furmanek 2008, 125.

⁴⁰ Lasak 1993, 73.

⁴¹ Lasak 1993, 72–73.

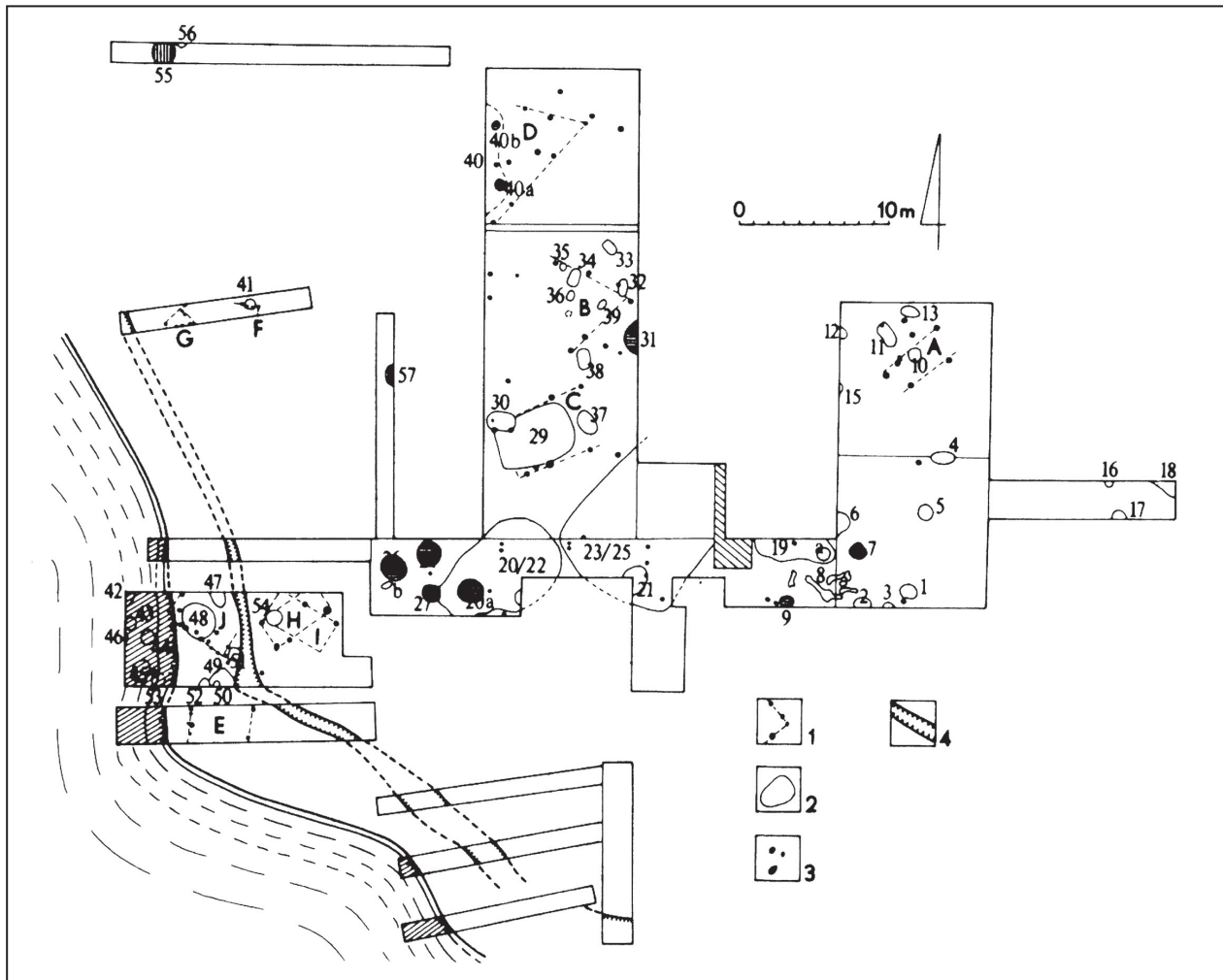


Fig. 5 Radłowie. Distribution of Early Bronze Age features across the settlement: 1–2 remains of buildings; 3 postholes; 4 ditch (after Lasak 1993)

rounded corners. They were sunk into the ground at approx. 0.30 to 0.40 m on the average. A few of these structures were accompanied by posthole pits, some located on their edges, suggesting the initial existence of an unidentified roof truss. In the case of the post houses, two of them (i.e. the above-mentioned structures in superposition) were fully unearthed. Both were similar in form (approx. rectangular) and size. The surface marked with the system of posthole pits amounted to approx. 9 to 9.50 m². The larger post houses, with the estimated surface of approx. 25–28 m², were not fully examined (e.g. buildings E and B).⁴² Among the unearthed remains of buildings in Radłowie, a specific planned manner of space development cannot be recognised. It appears that the order and type of buildings was merely a consequence of the space available at a particular moment and the size.

⁴² Lasak 1993, 70. 73 Fig. 2.

We have much less information concerning the inner layout with reference to the settlements in Jędrychowice and Nowa Cerekwia. Both sites were investigated to a limited extent, partly during the rescue excavations. In Jędrychowice, no remains of buildings, but only numerous utility pits were recorded within the excavated area (Fig. 6). In the case of Nowa Cerekwia, we have certain information indicating a specific manner of planning the settlement structure and concerning the type of dwelling structures (Fig. 7). The settlement was surrounded by two ditches (see below). Twenty structures were discovered within the area surrounded by the ditches; however, only four of them were examined during excavation. Two of them were underground structures, interpreted by the researchers as the remains of “dwelling pits”.⁴³ This function of the structures was apparently evidenced by a very rich inventory of finds, e.g. in the

⁴³ Kunawicz-Kosińska 1985, 114 Fig. 5.

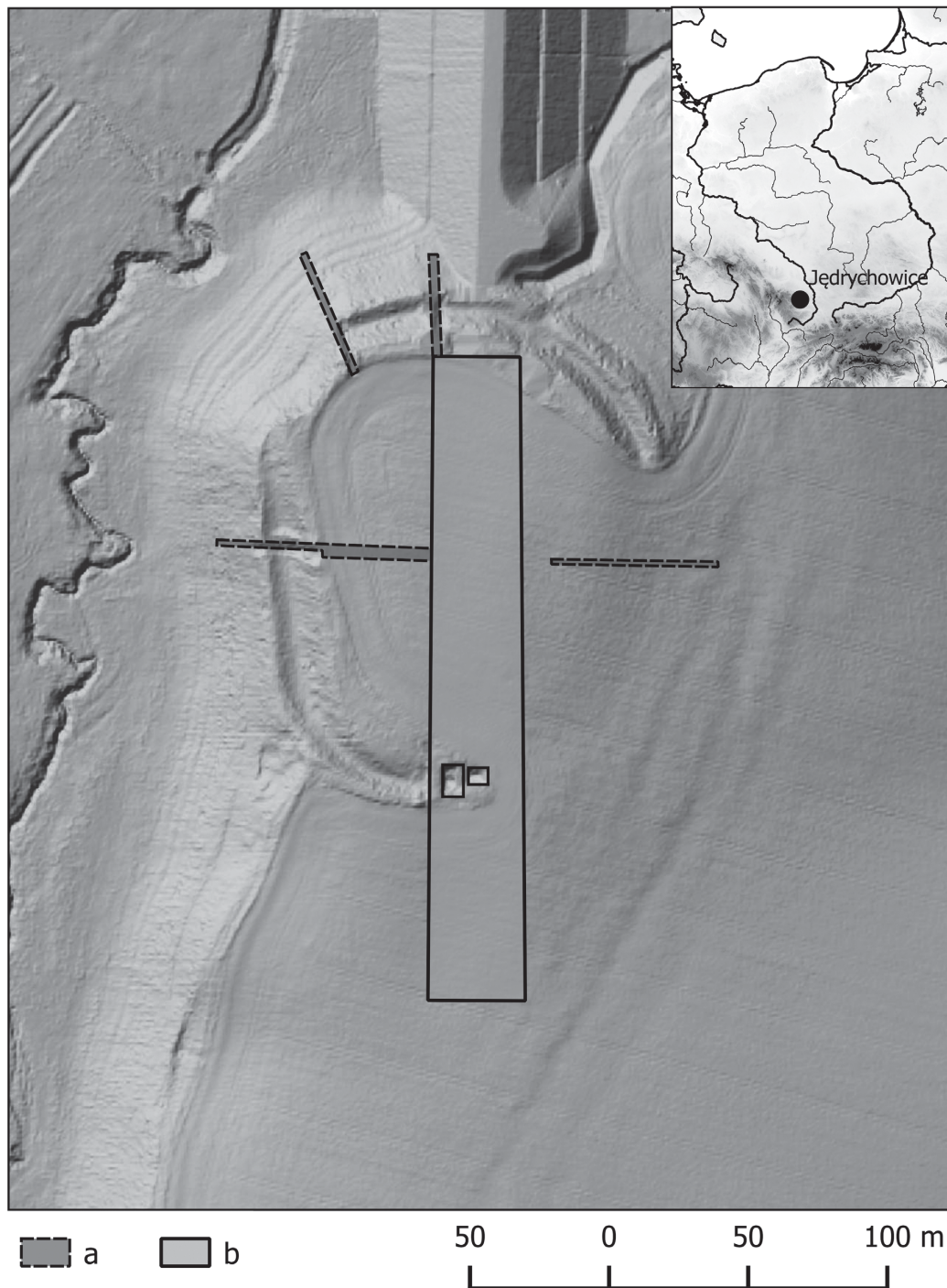


Fig. 6 Jędrychowice. General plan of the site with location of archaeological trench (a) and sondages (b) (after Chochorowski 1985; LiDAR data source www.geoportal.gov.pl)

form of a large collection of fragments of pottery, several grinding stones, a quern, a grinder and the clay end of a bellows' nozzle.⁴⁴ No further remains of buildings or structures similar to the above-described underground structures were discovered in the area surrounded by the larger ditch. However, it was only in this part of the site that pits with bone tools were recorded, as well as almost complete

skeletons of wild animals (European hare, vole, red fox, European polecat, doe and deer), preserved in anatomical order.⁴⁵ The difference in the quality of archaeological material and in the layout of archaeological structures in both parts of the site, noted by the authors, was interpreted as the reflection of the initial functional difference between two zones of the space used in the settlement. The majority

⁴⁴ Kunawicz-Kosińska 1985, 116.

⁴⁵ Kunawicz-Kosińska 1985, 119. 121.

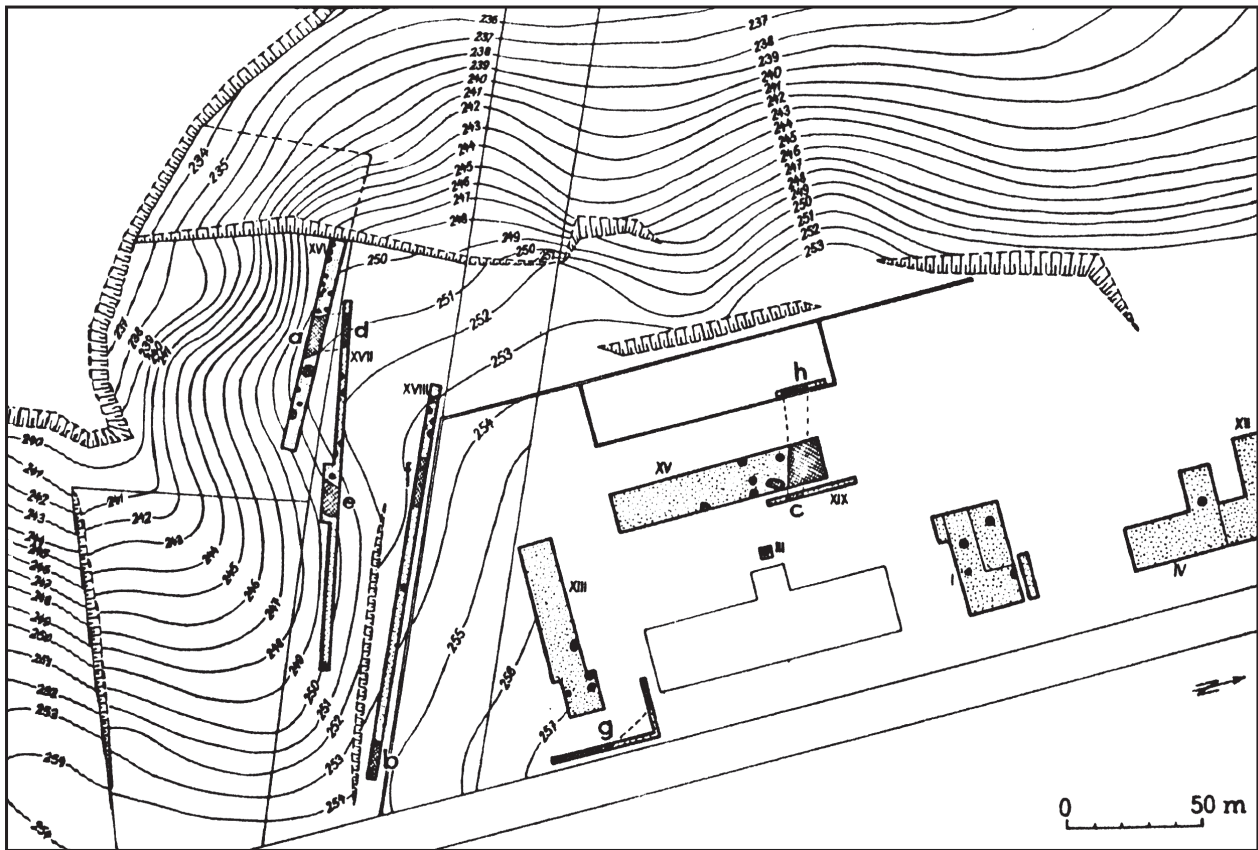


Fig. 7 Nowa Cerekwia. General plan of the site with location of archaeological trenches (after Kunawicz-Kosińska 1985)

of economic and manufacturing operations would take place within the part of the settlement surrounded by the larger ditch.⁴⁶ There was also additional information concerning the discovery of a post hut with the size of 8 × 8 m in the settlement during the pre-war research conducted by German archaeologists. However, the precise location of this structure is not known.⁴⁷

It should be emphasised that, similar to the case of Bruszczewo and a feature of Únětice culture sites in Germany and Czech Republic, burials of humans were also discovered in Jędrychowice and Nowa Cerekwia. In total, three burials are known from the two settlements: two burials with the skeletal remains of four people and one cremation.⁴⁸ The burial of an *adultus-maturus* female (about 35 years old) was discovered in Jędrychowice. Visible on the right and left parietal bones of the skull of the deceased, were characteristic injuries in the form of circular holes, that is traces of violence and blows that caused her death.⁴⁹ These

injuries are similar in form to the injuries observed on the skulls discovered in Tollense.⁵⁰ The burial of the female was located under the rampart surrounding the settlement.⁵¹ The body of the deceased was in a position that suggested intentional burial (in flexed position on the left side), and in a circular pit of approx. 150 cm in depth and approx. 180 cm in diameter. There were also a few fragments of pottery and of animal bones, as well as a human tooth of another person buried in the pit.⁵² One inhumation and one cremation were discovered in Nowa Cerekwia. Three individuals were identified in the inhumation grave: two males (one *juvenis-adultus*, approx. 20 years old, and one *adultus*, approx. 25–28 years old) and one female (*adultus*, approx. 25–28 years old).⁵³ The remains were discovered in a pit of approx. 240 cm in depth, with circular form in vertical projection and conical section.⁵⁴ The deceased were placed in a slightly flexed position on the

⁴⁶ Kunawicz-Kosińska 1985, 121. 124.

⁴⁷ Butent-Stefaniak 1997, 173.

⁴⁸ Szybowicz 1985, 93. 101.

⁴⁹ Szybowicz 1985, 95 Photos 1–2.

⁵⁰ Jantzen *et al.* 2011, 422 Fig. 4.

⁵¹ Szybowicz 1985, 93.

⁵² Szybowicz 1985, 93–94 Fig. 1.

⁵³ Szybowicz 1985, 101. 103.

⁵⁴ Kunawicz-Kosińska 1985, 123 Fig. 11.

right side. A mug characteristic for the late stage of the Únětice culture, two amber beads and a few fragments of pottery, as well as small fractions of animal bones were discovered in the pit's fill.⁵⁵ On the younger male's skull were found healed traces of successful trepanation.⁵⁶ The second burial in Nowa Cerekwia is a cremation grave. The burnt human remains were found inside a small ceramic vessel as well as outside, around it.⁵⁷

Unfortunately, the available publications do not provide any precise information about the location of the above-described burials. However, in the case of Únětice culture settlements, we are undoubtedly facing an increasingly frequent situation in which economic, dwelling and sepulchral structures were located in close proximity of each other.

Fortifications

We have a large amount of information concerning Early Bronze Age fortifications in the territory of present-day Poland. Even in the case of settlements in Nowa Cerekwia and Jędrzychowice, which have been only partly excavated, the range and scope of the investigations allow the reconstruction of basic parameters and types of architectural solutions applied in fortified constructions. The most complete and at the same time unique information was provided by research conducted in Bruszcze-wo where, as has already been mentioned, the anaerobic conditions of deposition enabled the recording of structures entirely made of timber, usually not-preserve in this part of Europe.

The first information about the fortifications on the Bruszcze-wo promontory referred to a stone-earthen rampart topped by a timber structure, which had been rebuilt on three occasions.⁵⁸ The investigations carried out in the 1990s made it possible to verify this information. The stratigraphy interpreted by the first excavator Z. Pieczyński as rampart remains was actually mixed material, including stone clusters, connected with the use of the site in Early Medieval and modern times.⁵⁹ The new stage of research involving drilling and aerial photography produced the first information on a ditch surrounding the settlement. The ditch

was investigated in two phases of excavations. During the first phase in the 1990s, the ditch profiles were uncovered in trenches no. 7 (northern part of the site), no. 10 (north-eastern part) and no. 16 (western part).⁶⁰ The second phase, taking place in the 2006–2007 seasons encompassed the defences, including the ditch, in the entrance area. The drillings and aerial photographs were supplemented by geophysical prospection in the 2003 season.⁶¹ It helped to gain a comprehensive visualization of the structure of archaeological remains, part of which can be unequivocally called fortifications (**Fig. 2**).

Generally, it must be stressed that the very location of the settlement was chosen taking strategic considerations into account. Namely, the settlement stood on a small promontory jutting out into the valley of the Samica River. Hence, the site was originally surrounded by water. The north-western part of the promontory was cut off by a ditch. In effect, the settlement was a completely isolated, almost circular space of 120 m in diameter and measuring about 1.5 ha.⁶²

The ditch varied in width. In trench 7 it was 20 m wide while its depth was up to 4.5 m.⁶³ In the entrance area (trench 51) the ditch was much narrower, and it must have measured only approx. 10–12 m. Considering the relationship between the depth of the ditch and that of the body of water, and the nature of strata recorded in the bottom of trench 7, it can be safely assumed that originally the ditch was filled with water.⁶⁴ Apart from the ditch, another obstacle barring entrance to the settlement were rows of palisades, which were unearthed on the inner side of the ditch (**Fig. 8**). They were about 2 m apart⁶⁵ and originally they had been installed directly in the water. For this reason, their bottom parts survived in relatively good condition enabling researchers to estimate their size and to determine the kind of wood used to build them.⁶⁶ The palisades were made of rows of oak trunks up to 30 cm in diameter. The radiocarbon datings obtained show that individual sections of one of the palisades were regularly repaired over a timespan of about 200 years.⁶⁷

⁵⁵ Kunawicz-Kosińska 1985, 121.

⁵⁶ Szybowski 1985, 103.

⁵⁷ Szybowski 1985, 103.

⁵⁸ Pieczyński 1985; Czebreszuk *et al.* 2004b, 20.

⁵⁹ Czebreszuk 2004, 83.

⁶⁰ Müller/Czebreszuk 2003, 451 Fig. 6.

⁶¹ Ducke/Müller 2004.

⁶² Czebreszuk *et al.* 2004a, 71.

⁶³ Czebreszuk *et al.* 2004a, 71–72 Fig. 26.

⁶⁴ Czebreszuk *et al.* 2004a, 71.

⁶⁵ Müller/Czebreszuk 2003, 465 Fig. 10.

⁶⁶ Müller/Czebreszuk 2003, 457–458 Figs. 11–12.

⁶⁷ Czebreszuk *et al.* 2004a, 71–73 Fig. 27.

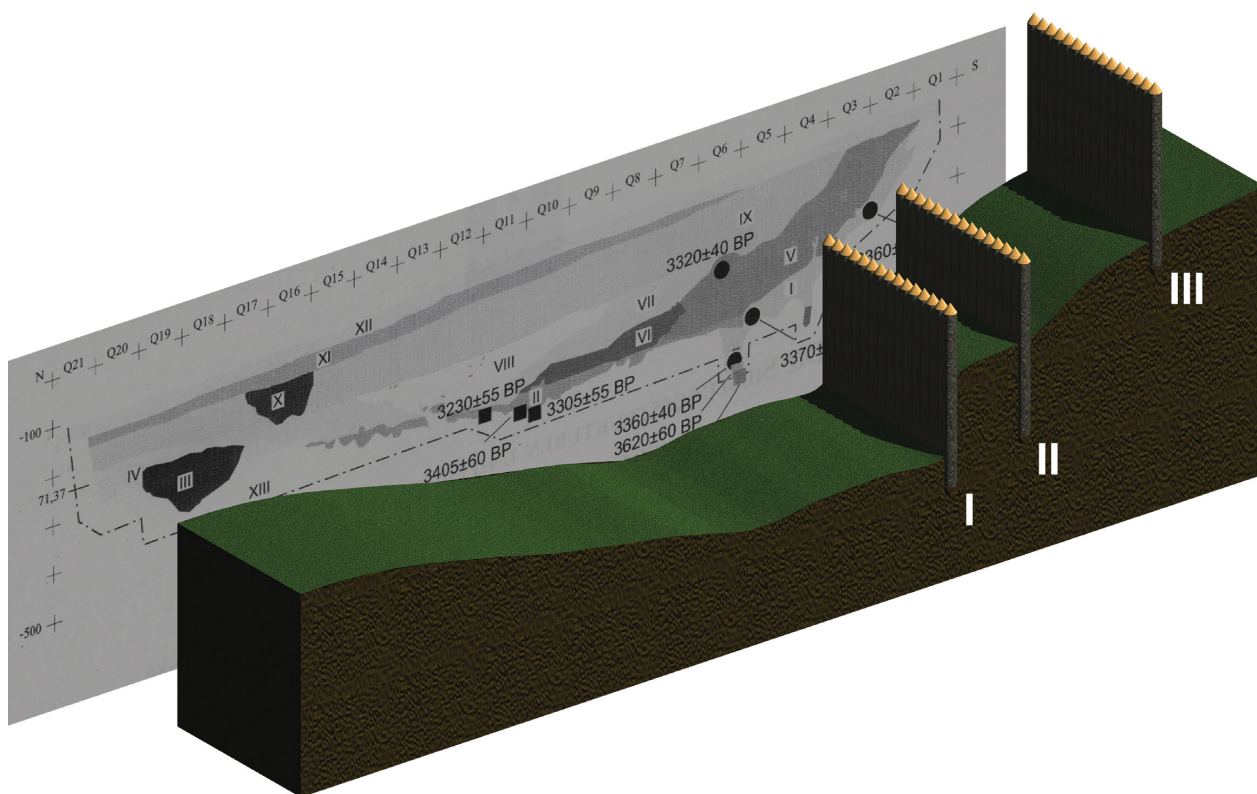


Fig. 8 Bruszczewo. Three rows of palisades (after Stróżyk 2015)

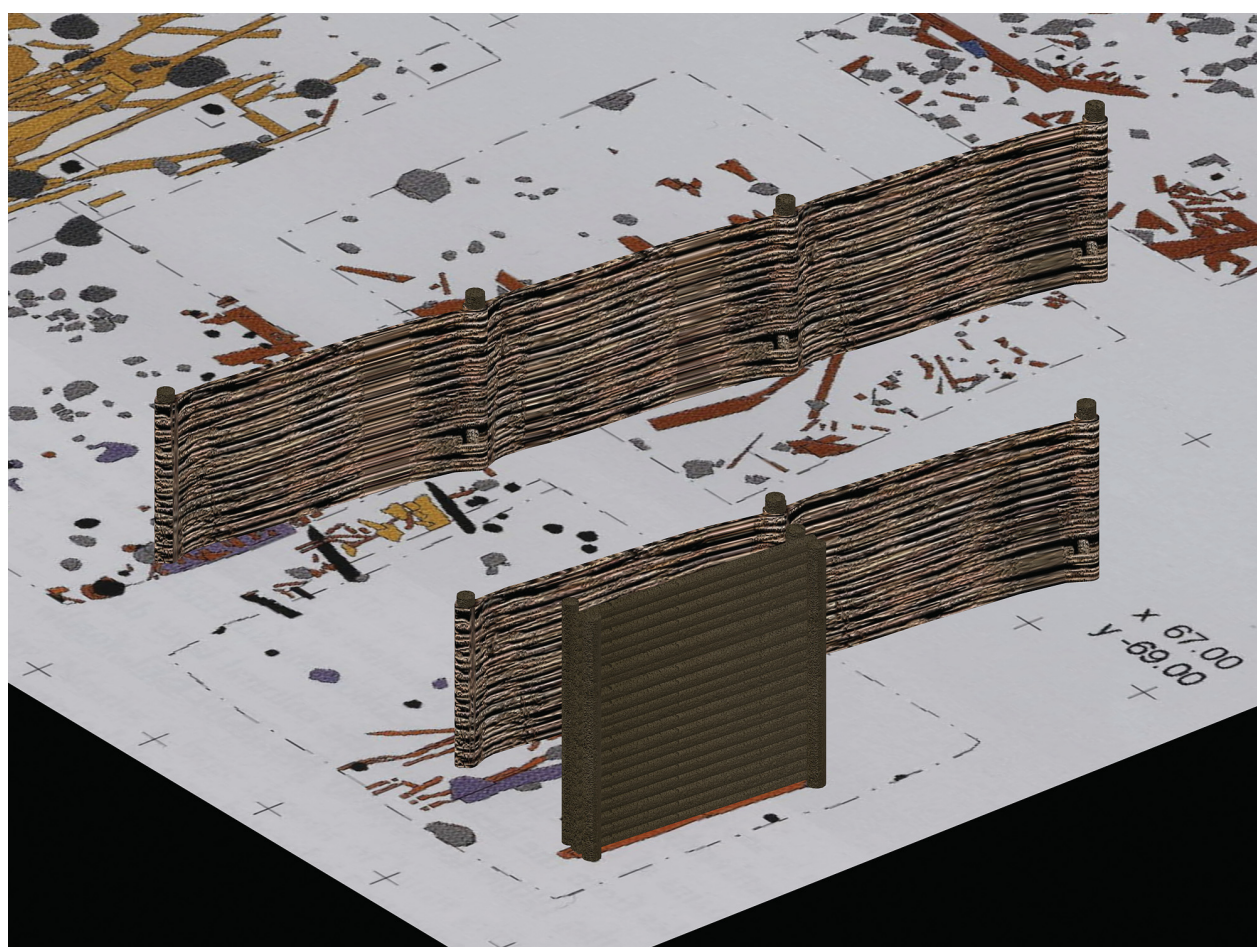


Fig. 9 Bruszczewo. Timber structures in the peat zone of the site (after Stróżyk 2015)

In the entrance area, in the inner palisade row, a breach was recorded in which a dark streak of charcoal and burnt clay could be discerned. The streak formed a crescent about 4 m long while its width varied from 0.1 to 0.2 m. This layer is presumably what remained of a burnt gate.⁶⁸

In trench 51 a large assemblage of daub fragments was recovered, which show how certain elements of the entrance area had been built. A large part of the daub fragments bear wood impressions, which differ in diameter.⁶⁹ Next to a small number of stake impressions of about 5 cm in diameter there is a large number of impressions of small branches only about 1.5 cm in diameter. The arrangement of impressions – frequently parallel (possibly vertical) clusters of three elements (two next to each other with the third protruding forward) – does not provide enough information to draw any conclusions about the construction of the gate. What is certain, however, is the fact that in the entrance area there was a structure built of wooden elements of different sizes and additionally secured with clay.

Unique information on the structure, sizes and construction of defences at Bruszczevo was supplied by investigations in the peat zone of the site. In the oxygen-free environment prevailing there discoveries were made of excellently preserved fragments of wooden structures designed to protect the settlement's shoreline.

There were three lines of wooden structures stretching roughly along the North-South axis: two wattle structures (fascines) and a timber wall. The former consisted of bundles intertwined with branches (**Fig. 9**).⁷⁰ In 2005, excavations in quadrat 4 (trench 30) supplied the first clear evidence of differences between the two lines of wattle. The inner structure was built of thinner branches measuring 2–4 cm in diameter, while the outer wattle, closer to the lake, consisted of thicker branches measuring 6–8 cm in diameter.⁷¹ Relying on the length of collapsed piles, found in different quadrats, which once were elements of the wattle, their original minimum height can be roughly estimated at about 3 m.⁷²

In front of both wattles, looking from the lake, there stood a massive timber wall. It was built of beams inserted between double posts. The excel-

lent state of preservation of timber structures in the peat zone of the site helped to determine tree species in many instances.⁷³ The most widely represented species in the examined piles was that of oak. Its share amounted to 62%.⁷⁴ In some trenches, oak was the only species used for building all or certain defence elements. Next to oak, relatively frequent use was made of ash and alder. Other species identified at the site were clearly far less important. The dominance of oak suggests that it was carefully selected. Undoubtedly, the specific properties of oak played a role. Oak is a particularly desirable building material because of its flexibility, durability and cleavability as well as resistance to water and, at a specific age (60–70 years), to fire.⁷⁵ Also ash and alder make a good building material suitable for a damp environment.⁷⁶ The use of other tree species, less suitable for building purposes, may be tentatively explained by chronological differences, i.e. the fact that the defences were built in phases, or during repair work on the structures. As well established by the study of the original natural environment surrounding the settlement, the process of the slow degradation of the environment (seen in the deforestation of the surrounding area during the late phase of the settlement's life) might have resulted in making use of more easily available but less suitable tree species.⁷⁷ There are still too few dendrological studies available to consider this hypothesis as the only plausible explanation. It is supported to some extent by several recorded instances of the secondary use of older pieces of timber, which originally had undoubtedly served other purposes, to construct individual fortification elements. For example, in the fortifications from trench 31/6, a beam was used bearing characteristic tool marks made on a tree cut down 10 years earlier than other trees recorded in the same structure.⁷⁸

The good state of preservation of timber structures allowed researchers to study how individual posts had been worked. A considerable number of them were sharpened.⁷⁹ Close scrutiny of five examples of tool marks left on posts in Bruszcze-

⁶⁸ Kneisel 2010, 96–98.

⁶⁹ Jaeger/Stróżyk 2015.

⁷⁰ Müller 2004, 125–133 Figs. 64–78.

⁷¹ Kneisel 2010, 112.

⁷² Kneisel 2010, 114.

⁷³ Kneisel/Kroll 2010.

⁷⁴ Kneisel/Kroll 2010, 567 Fig. 2.

⁷⁵ Romanowska-Grabowska 1991, 221.

⁷⁶ Kneisel/Kroll 2010, 566. 568.

⁷⁷ Kneisel/Kroll 2010, 570.

⁷⁸ Kneisel/Kroll 2010, 574. 648 (P6031A).

⁷⁹ For excellent illustrations see Kneisel/Kroll 2010, 587–651.

wo showed a remarkable coincidence between the width of the tool marks and that of the cutting edge of a bronze axe found at the site.⁸⁰ In the case of a site of a unique character on a regional scale, which Bruszczevo unquestionably is, this finding is of crucial importance. Not only the monumentality of Bruszczevo fortifications, but also the way they were built – using widely available bronze tools – sent people a clear signal of how advanced the social organization of settlement inhabitants was.⁸¹

Despite its limited range, excavations in Jędrychowice and Nowa Cerekwia provided certain information concerning the fortifications in those settlements. The settlement of Jędrychowice was surrounded by a double line of fortifications between which the ditch was located. The inner ring of fortifications consisted of a row of buildings, probably with a log frame structure, 3 m in width. On the ditch side, the buildings were protected by a gravel and loess embankment of 1 m in width, perhaps additionally faced with a structure made of loosely arranged stones. The outer earthen rampart had different base width in the three examined spots (6 m in the South section, 8 m in the North section and 10 m in the West section), whereas its initial height was estimated by the research authors at approx. 3–4 m. The ditch located between the described structures had a V-shaped cross-section and differed in size in the particular examined sections (10 m in width and 3.5 m in depth in the South section, 14 m in width and 3.2 m in depth in the West section, 12 m in width and 4 m in depth in the North section, as well as 13 m in width and 3.9 m in depth in the East section). The course of the line of fortifications was adjusted to the area's topography, which additionally raised the defensive value.⁸²

As mentioned above in the description of the inner layout of the settlement in Nowa Cerekwia, this site was surrounded by two ditches. However, it was only partially investigated. It was dug cross-wise down to the undisturbed soil layer in three places, whereas in several other areas only the ceilings were recorded. The first ditch surrounded a smaller area of approx. 60–80 m in diameter, whereas the outer ditch enclosed an area of approx.

150 m in diameter.⁸³ In particular examined areas, the ditches differ in size, ranging from approx. 6 m to 14 m in width and 3.5 m in depth.⁸⁴ In the recorded profiles, their sections are V-shaped.⁸⁵ In one of the examined sections of the outer ditch, there were distinct postholes of approx. 20–30 cm in diameter recorded at the bottom, probably the remains of a palisade (**Fig. 10**).⁸⁶ Due to the fragmentary character of the excavation of the site, it is difficult to make an unambiguous statement about the prudent hypothesis proposed by author of research in Nowa Cerekwia, according to which the layers recorded at the site are the relics of a clay and gravel rampart located on the outer side of the ditch, surrounding the smaller part of the settlement.⁸⁷

The structures discovered in Radłowice are completely different in form from the described examples of complex fortifications around the settlements in Bruszczevo, Jędrychowice and Nowa Cerekwia. The settlement was probably surrounded by two lines of artificial fortifications. They were investigated through excavations only to a small extent. However, the research results clearly demonstrate small-sized structures (**Fig. 5**). The width of the inner ditch varied, ranging from approx. 0.9 to 1.9 m on the average. In the widest places (unearthed to a length of approx. 30 m), it was 3 to 5 m in width. The depth was determined as approx. 1.0 to 1.5 m. The ditch was divergent not only in terms of size, but also structure. In several spots, the research authors identified traces of repairs and reconstructions, as well as remains of timber structures, both postholes and traces of beams arranged along the ditch wall.⁸⁸ The second ditch was located at a distance of approx. 4 m from the above-described inner ditch. It was approx. 1.75 m in width and only 0.25–0.4 m in depth. Both ditches were accompanied by soil embankments with the preserved height of approx. 0.5–0.7 m and preserved width at the base of approx. 2.4–2.6 m.⁸⁹ The site in Radłowice was located in a specific area, protected by a still water pool from the West. Due to the relatively small sizes of ditches, the type of sediments

⁸⁰ Kneisel/Kroll 2010, 570–572 Fig. 5.

⁸¹ Jaeger/Czebreszuk 2010, 220–221.

⁸² Chochorowski 1985, 52–53 Fig. 4.

⁸³ Kunawicz-Kosińska 1985, 109.

⁸⁴ Kunawicz-Kosińska 1985, 109. 113. 115 Figs. 3–4.

⁸⁵ Kunawicz-Kosińska 1985, 113 Fig. 4.

⁸⁶ Kunawicz-Kosińska 1985, 113. 115 Fig. 4c.

⁸⁷ Kunawicz-Kosińska 1985, 112.

⁸⁸ Lasak 1993, 74 Fig. 3c.

⁸⁹ Lasak 1991, 33–39.

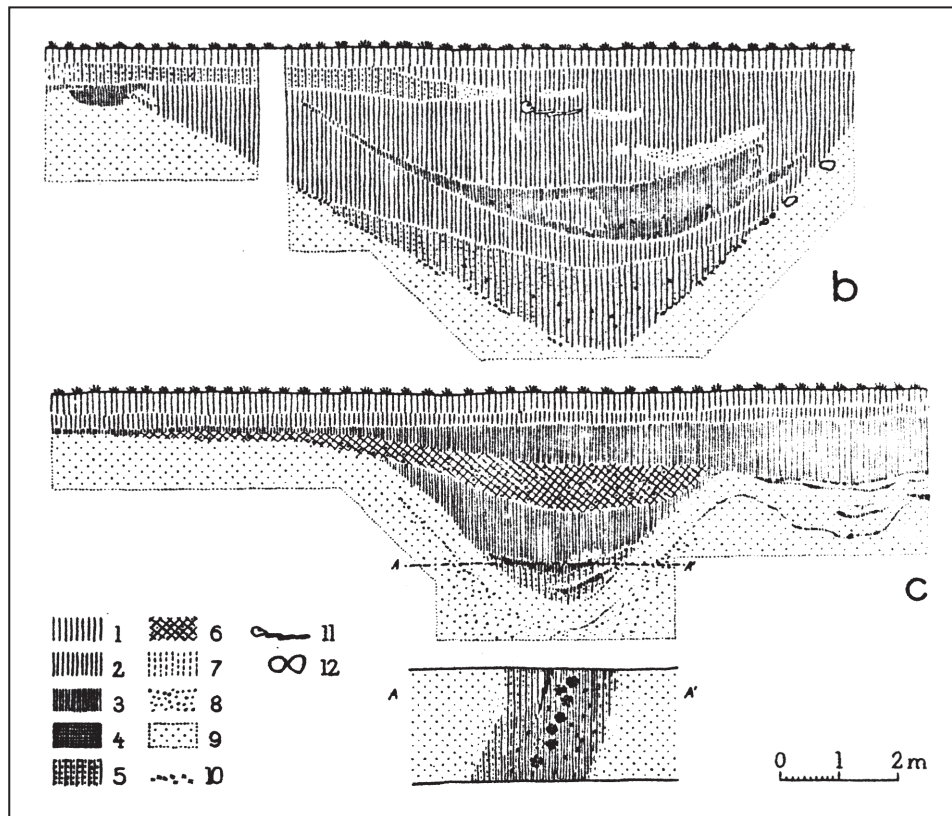


Fig. 10 Nowa Cerekwia. V-shaped sections of the outer ditch and preserved postholes at the bottom (after Kunawicz-Kosińska 1985)

in them (suggesting a longer presence of water)⁹⁰ and the fact that they were located precisely in the coastal zone of the still water pool, the research authors suggest that the discovered structures could have had a certain hydrotechnical function (dewatering this part of the settlement and/or collecting water for economic purposes) rather than a defensive character.⁹¹

Summing up, with the exception of the case of Radłowice, the complexity and significant sizes of fortifications discovered in settlements of the Únětice culture in the territory of present-day Poland should be emphasized. The case of Bruszczevo seems to be particularly significant in this regard. The specific anaerobic deposition conditions resulted in the preservation of elements that had been initially built only of timber. It can be assumed that similar structures also existed in some of the known sites (not only in the territory of Poland). The palisades crowning the earthen ramparts should be considered as equally probable, elements of defensive structures of Bronze Age settlements, but unpreserved today. The lower

parts of these structures were destroyed as a consequence of natural and anthropogenic post-deposition processes; as a result, very rarely we are able to record their initial structures during excavations.

Chronology

The chronology of all sites discussed so far has been determined both by means of typochronological pottery analyses and radiocarbon dating. Moreover, in case of the settlement in Bruszczevo, we have additional information, i.e. age determination using the dendrochronological method. In general, it is from this site that the largest amount of data in the field of absolute chronology derives from.⁹² Overall, 116 ¹⁴C-dates have been obtained during many years of research in Bruszczevo, 78 of which were carried out in the laboratories in Poznań and Kiel in AMS technology. The total calibration of dates related to the Early Bronze Age phase of settlement in Bruszczevo covers the entire first half of the 2nd millennium BC. However, more precise conclusions concerning the dynamics of settlement can be drawn taking into consideration the origin

⁹⁰ Lasak 1991, 39.

⁹¹ Lasak 1993, 76; Lasak/Furmanek 2008, 124.

⁹² Czebreszuk *et al.* 2015; Jaeger 2016a, 58–61.

of analysed samples from three distinct zones: layers in the peat zone, structures in the peninsula area with mineral soils, as well as layers and structures in the fortification area. The dating of the first of the above-mentioned zones, the peat zone, indicates the period 1950–1680 BC. Structures located in the central (mineral) zone of the settlement began with the period starting also around 1950 BC. However, they indicate a longer period of activity in this part of the settlement, whose end is dated at about 1500 BC. The widest range of datings concerns the area of fortifications investigated through excavations. They indicate the period from about 2000 BC to about 1450 BC. Taking into consideration datings from this part of the site, the beginning of settlement activity in Bruszczewo was probably related to digging the ditch and building the first palisade. The available ¹⁴C-datings in this case indicate the timespan of approx. 2020–1940 BC. Moreover, the above-mentioned datings attained with the dendrochronological method indicate the dynamics of construction of specific timber structures over time. In the peat zone of the site from which the discussed age designations originate, the oldest element was the external fascine structure. The first trees used for its construction were cut down in 1797 BC, while the last ones in 1790 BC. Four years later, in 1793 BC, construction of the internal fascine structure was started. The last timber used for its construction was obtained from the trees cut down in 1787 BC. The external wall made of half-beams was also built in the same year.⁹³

We have much less information concerning the absolute chronology of the sites in Jędrychowice, Nowa Cerekwia and Radłowice. The first two sites were dated using the radiocarbon method to the end of 1980s (¹⁴C-dates 7 and 3 respectively). On the basis of non-calibrated datings obtained at that time and using samples from particular storage pits, the age of both sites was generally determined as at the turn of Bronze Age A2 and Bronze Age B1.⁹⁴ The later calibration of datings moved back the period of functioning of both settlements and linked it with the classical stage of development of the Únětice culture.⁹⁵

With reference to the site in Radłowice, we have only two ¹⁴C-datings. According to the authors, their different ranges would confirm the two phases

in the settlement's functioning (the classical phase and the late phase of the Únětice culture). However, it is necessary to exercise some caution in this respect due to the small number of datings (1 date per 1 settlement phase) and the quality of samples (the older date was obtained from charcoal).

Summing up the above information, it can be concluded that the phase of establishment of fortified settlements of the Únětice culture is related to the classical phase of its development.

Fortified Settlements in the Polish Western Carpathians

The second of the groups of the Early Bronze Age fortified settlements mentioned in the introduction are located in south-eastern Poland, in the area of the Polish part of the Western Carpathian range (**Fig. 1**). Overall, we know three sites with fortifications dated to the Early Bronze Age. However, it should be emphasized that in one site (Trzcini-ca), the remains of fortifications of two settlements from different periods were found, linked with two cultural units: the Otomani-Füzesabony culture and the Pleszów group of the Mierzanowice culture, which was related to some extent with the former. In case of the Pleszów group, the presence of Carpathian elements in the form of influences in the pottery style has long been discussed in literature on the subject.⁹⁶ The settlement established by the population of Pleszów group still remains the oldest known example of fortified construction in the region. Its establishment was preceded by a larger settlement process related to the expansion of Otomani-Füzesabony culture.⁹⁷ This phenomenon resulted in increasingly numerous discoveries of settlements, at least three of which were fortified.⁹⁸ These include: Trzcini-ca, Trepcza and Maszkowice.

Inner Layout

In the case of the site in Trepcza, we have no information regarding the inner layout of the settlement. This is due to the fact that the Early Bronze Age layers in the form of remains of fortifications

⁹³ Czebreszuk *et al.* 2015.

⁹⁴ Molak 2010, 300–301.

⁹⁵ Molak 2008; 2010.

⁹⁶ Kadrow/Machnik 1997, 138; Gancarski 1999; Górski 2010, 228–231 with further literature.

⁹⁷ Górski 2010.

⁹⁸ Gancarski 1999, 146; 2002.

were discovered as a result of excavations directed towards investigating and documenting the Early Medieval settlement.⁹⁹ The site in Trzcínica was investigated over many seasons' time, precisely due to the identified remains of fortifications and cultural layers from the Bronze Age. As mentioned above, the result was the discovery of remains of the settlement linked with two cultural units. Further, their succession in the settlement was not related to any hiatus. Many years of excavation brought to light the remains of cultural layers, mainly accumulated near particular lines of fortifications (ramparts); however, they did not provide any significant information concerning the arrangement and type of layout of both settlements. The research authors focused mainly on investigation of the structure of fortifications and the succession of particular construction phases within their borders. With regard to the inner layout of the earlier settlement connected with the Pleszów group, only assumptions were made about the possible existence of houses with post structure or log frame structure and walls covered with clay, which was preserved in the form of burnt daub pieces with traces of whitening.¹⁰⁰ With reference to the settlement layout in the Otomani-Füzesabony cultural phase, the available publications only contained information about the assumed existence of a compact inner layout, adjacent to the line of fortifications.¹⁰¹ A relic of this type of layout could have been the build-up of stones discovered near the southern rampart section, interpreted as a relic of a log-frame building.¹⁰² The location (near the line of fortifications) of two buildings, the remains of which were discovered in the course of excavations in Maszkowice, was probably similar. In the layers connected with the second settlement phase of the site (Maszkowice II; about 1700–1620 BC),¹⁰³ remains of two buildings were recorded, between which a large storage pit was located.¹⁰⁴ The buildings, located near the gate/passage visible in the stone wall, were built on an approximately quadrangular plan with the size of approx. 6 × 5 m. Within the borders of remains of the huts, charred wooden elements (boards) were recorded,

and in one case also a thin layer of off-white clay, interpreted as the remains of a floor.¹⁰⁵

In view of the above information, it is difficult to draw general conclusions concerning the manner of establishing the inhabited space and the types of buildings erected in the settlement. It seems that a certain repetitive feature in the discussed region of Poland could have been the location of buildings in close proximity to each other, near (along?) the fortifications. This manner of erecting buildings is known from many sites of different groups from the Bronze Age in the Carpathian Basin.¹⁰⁶

Fortifications

We have much more information about the fortifications unearthed in Carpathian settlements. This results from the scale and range of excavation research conducted there, as well as research questions of the authors who, facing the multi-phase history of settlement in particular sites, have determined their detailed chronology on the basis of investigations on the stratigraphy of fortified settlements.

In Trepcza, underneath two younger (Early Medieval) layers of remains of a rampart structure, the debris of sandstone and a charred beam of 1 m in length connected with them were unearthed. These remains were located in a pit of up to approx. 0.8 m in width and they constituted elements of an Early Bronze Age dam structure.¹⁰⁷ No fortifications were identified in other parts of the site.

More complete information on fortifications was obtained after many years of research in Trzcínica. In the course of the research, remains of a complex system of timber and earthen fortifications and ditch, modified over the development of the settlement, were revealed. The site is located in an area that offers a very good natural defensive position (**Fig. 11**). A pragmatic manner of using this convenient topography can be noticed in each stage of the expansion of fortifications in Trzcínica.¹⁰⁸ During the first phase habitation by Pleszów group communities, the settlement was protected by structures built on the southern and part of the western side. The fortifications had the

⁹⁹ Gancarski/Ginalski 2001, 305. 308.

¹⁰⁰ Gancarski 2006, 17. 215 Photo 141.

¹⁰¹ Gancarski 2002, 109; 2006, 21.

¹⁰² Gancarski 2006, 23. 109 Photo 37.

¹⁰³ Przybyła 2016, 299–300.

¹⁰⁴ Przybyła/Skoneczna 2011, 13 Fig. 5.

¹⁰⁵ Przybyła 2016, 300.

¹⁰⁶ Jaeger 2016a, 78. 82. 107.

¹⁰⁷ Gancarski/Ginalski 2001, 311–312 Fig. 6B.

¹⁰⁸ Gancarski 2006, 87 Fig. 12.



Fig. 11 Trzcinica. General plan of Early Bronze Age site and fortifications (after Gancarski 2006)

form of a rampart with a base width of approx. 1.8–2.5 m and preserved height of approx. 1.1 m. The rampart walls were built of beams arranged between vertical posts. The posts were dug in pairs deep into the substrate (even up to 0.9 m in depth) and located at intervals of approx. 1.6–2.1 m from each other.¹⁰⁹ The rampart was additionally protected by a palisade, in some sections inclined in a distinctive manner (even at an angle of approx. 70°) towards the interior of the settlement. The palisade was located entirely in the undisturbed soil layer, thus traversing the rampart embankment along its entire height. The documented distance between the palisade posts was between 0.1 m and 0.5 m, whereas the diameter of preserved postholes ranged between approx. 0.2 m and 0.3 m. The lower part of the rampart was stabilised by timber beams located along its axis. The outer wall of the rampart was probably lower in

height than the inner wall.¹¹⁰ Access to the settlement was easiest from the western side. It seems logical that for this reason part of the area had to be protected with artificial fortifications. Unfortunately, they were destroyed during the later period of settlement. Part of the inhabited area (on the northern side and on the side of the nearby river) was probably protected only by the significant steepness of the slope of the hill on which the settlement was established, or alternatively by a simple structure, e.g. in the form of a palisade.¹¹¹ In the following stage of settlement, related to the Otomani-Füzesabony culture communities, the older fortifications were modified. It was probably at that stage of settlement that the palisade or a similar light timber structure was built on the northern and eastern sides. The buildings, erected in a compact layout, were adjacent to this part of

¹⁰⁹ Gancarski 2006, 99 Photo 30; 152 Fig. 21.

¹¹⁰ Gancarski 2002, 107. 110 Fig. 12; 2006, 16.

¹¹¹ Gancarski 1999, 136; 2006, 17.

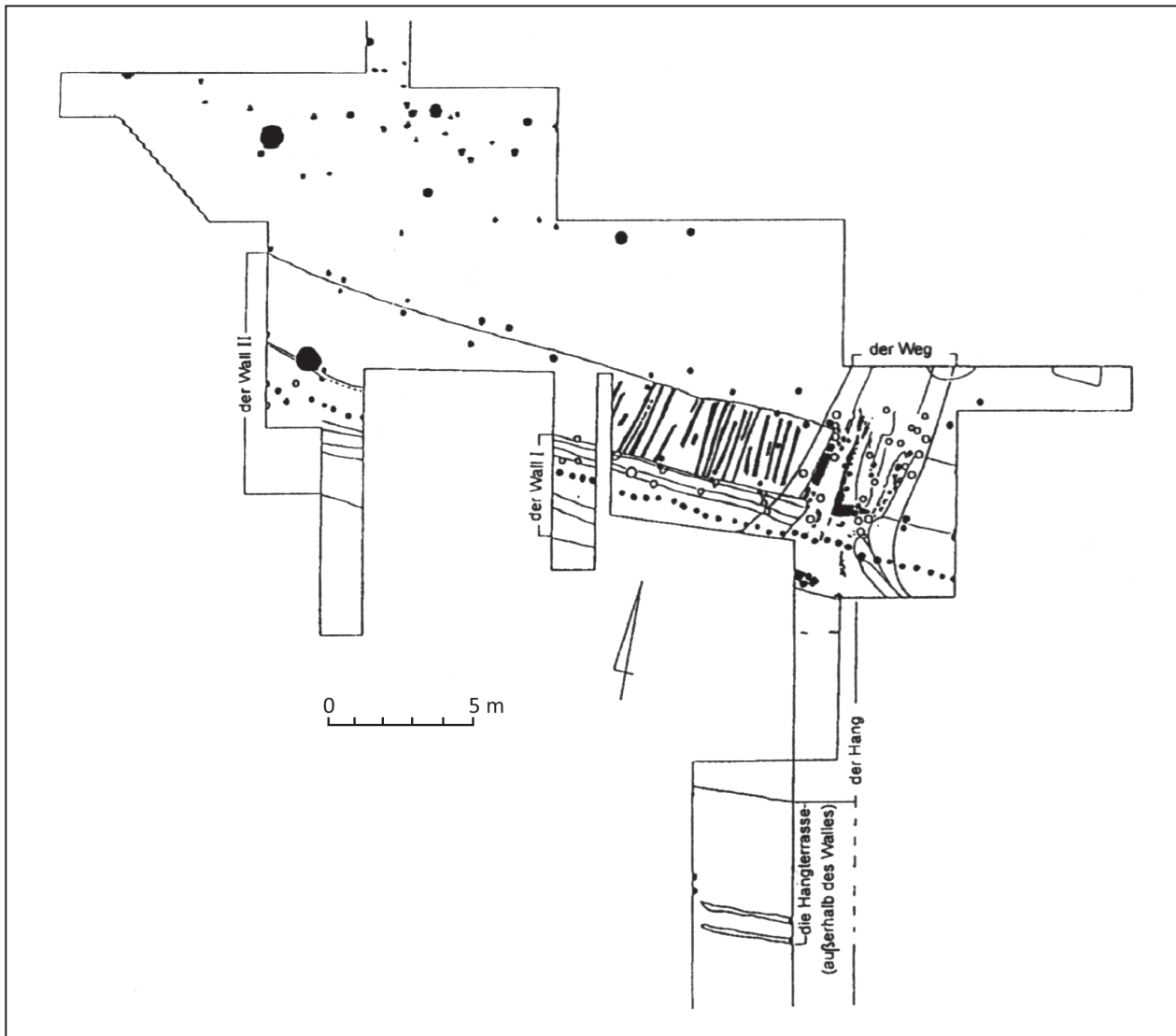


Fig. 12 Trzcínica. Remains of the Early Bronze Age road and gate related to younger Otomani-Füzesabony settlement (after Gancarski 2006)

fortifications.¹¹² Further modifications of the system of fortifications consisted of the construction of a small soil embankment in the part of the site that had previously been protected either by the topography of the area (steep slopes), or the above-mentioned palisade or other simple timber structure associated with the Pleszów group settlement. Further elements of fortifications were discovered underneath the medieval rampart layers. They had the form of a double row of palisades. However, radiocarbon dating of posts of these palisades does not allow them to be linked unarguably with the prehistoric settlement period.¹¹³ During the initial habitation phase of the settlement by Otomani-Füzesabony culture com-

munities, in the southern part of the hill, a tunnel was dug across the rampart, within which the road and entrance to the settlement were located (Fig. 12). Perhaps the entire entrance to the settlement was additionally protected by a form of a kind of above-ground structure; however, this type of defensive architecture is extremely rarely preserved in stratigraphic contexts. In some sections the road was fitted with transverse timber beams. The walls of the pass formed in the rampart, in which a kind of a gate was also probably located, were reinforced with palisades.¹¹⁴ The above-described fortifications were damaged by fire. However, the structures were renovated and modified, whereby the entire settlement area was expanded to approx. 2 ha by adding space in the

¹¹² Gancarski 2006, 21.

¹¹³ Gancarski 2002, 109, 111; 2006, 21.

¹¹⁴ Gancarski 1999, 140 Fig. 5; 2002, 111.

western part of the hill, protected with sectional ramparts, palisades and the natural steepness of slopes.¹¹⁵ The space in front of the burnt rampart was fitted with timber beams, crosswise to the rampart axis. This prepared surface was covered with a layer of clay, reaching the height of the older rampart. The character of fortifications in other parts of the hill was preserved. On the side of the upland, access to the settlement was protected by a shallow ditch of approx. 1 m in depth and approx. 8–9 m in width. It seems probable that the second row of fortifications was built during the above-described phase of expansion of fortifications, a distance of approx. 8–9 m behind the rampart. They had the form of a “shelf” of approx. 304 m in width, created in the ground and in a course consistent with the rampart line. On the outside, the “shelf” was probably protected by a palisade, or a kind of wall made of timber.¹¹⁶ In the last phase of development of the settlement in Trzcinica, during which clear stylistic influences of Trzcinica culture were noted, the inhabitants no longer attached importance to maintaining or modifying the fortifications.¹¹⁷

The most spectacular remains of fortifications were discovered in Maszkowice. This site had already been examined in the 1960s and 1970s. However, excavations at that time were focused on the central part of the hill.¹¹⁸ The new stage of archaeological research in Maszkowice was oriented towards investigating the hill's edges. It was in this part of the site that fortifications were unearthed, which differed from the structures known from other Carpathian sites (Fig. 13).¹¹⁹ During the first settlement phase distinguished at the site (Maszkowice I), the population that had arrived in the area (there are no traces of any older settlement at the site) created an artificial terrace on the flat surface upon which fortifications were raised. The main elements of the terrace were a clay embankment and a stone structure in the form of a dry wall. The clay embankment was approx. 5–9 m in width and was based on the internal façade of the stone wall. In the opinion of the author, both elements were built at the same time and their establishment preceded



Fig. 13 Maszkowice. Uncovered portion of dry stone wall (after Przybyła 2016)

the actual beginning of settlement on the hill.¹²⁰ The stone wall structure was complex. The inner façade was made of a dry wall built of a single row of sandstones of significant size and weight. The wall's height preserved to this day reached approx. 1.2 m. The outer structure façade was also made of a single row of stones, the only difference being that their sizes were much larger, reaching even up to 200 kg in weight in some cases. The outer wall façade also differed from the inner façade in the choice of construction material. The stone blocks were selected according to their sizes and possibilities of adjusting the structure against each other. Part of them were finished into regular quadrangular blocks. The initial height of stone fortifications was estimated at approx. 2.7 m to 3 m.¹²¹ Stone was also used for building the gate structure in Maszkowice. The preserved width of the pass was approx. 1.5 m, whereas its walls were formed by tall (approx. 1.5 m) sandstone blocks.¹²² The fortifications discovered in Maszkowice are completely different from those known from the other sites of the Otomani-Füzesabony culture, as well as from other groups of Carpathian Bronze Age.¹²³ The use of stone for constructing fortifications was

¹¹⁵ Gancarski 2006, 22.

¹¹⁶ Gancarski 1999, 142; 2002, 112–113 Photo 125; 2006, 22–23. 135 Fig. 19. 151 Fig. 20.

¹¹⁷ Gancarski 1999, 142.

¹¹⁸ Cabalska 1977; Przybyła *et al.* 2012, 226–228

¹¹⁹ Przybyła/Skoneczna 2011; Przybyła 2016.

¹²⁰ Przybyła 2016, 294.

¹²¹ Przybyła 2016, 294–296.

¹²² Przybyła 2016, 297–298.

¹²³ Przybyła 2016, 297–298.

(and continues to be) traditionally regarded in the archaeology of the Central European Bronze Age as evidence for a civilizational impact of communities inhabiting a broadly understood “Aegean” zone.¹²⁴ The author of research in Maszkowice also supports the hypothesis of an external origin of the architectural models, on the basis of which the fortifications of the above-described settlement were built.¹²⁵ Referring to a wide set of potential inspirations for builders in Maszkowice, he points out the Caput Adriae area and a very well-known settlement in Monkodonja, a site that has the most formal common features with Maszkowice (use of rock blocks, including regular/processed blocks, and a complex stone structure of fortifications in the entrance zone to the settlement), as well as the similar chronology of both sites (second half of the 18th century BC).¹²⁶ Taking into consideration the small scope of excavation research on the stone fortifications in Maszkowice, as well as the modest sequence of ¹⁴C-datings that still needs to be developed, it is easy to understand the caution of the research author, who does not speak directly and unambiguously about the potential origin of construction know-how, based upon which the discovered stone fortifications were built. In my opinion, it is still worth conducting an in-depth discussion (which was not developed during the latest presentation of results of research in Maszkowice)¹²⁷ about potential relationships (namely: whether it is necessary to indicate such relationships and whether we should completely reject the opinion about the local origin of the applied construction) between this discovered stone construction and similar situations known from Alpine settlements (in the territory of Austria, Switzerland and part of northern Italy). In this context, the convergent approach towards a specific, mountainous location of settlements, visible in the relevant preparation of a stable substrate for the construction of fortifications, seems to be more important than the stone fortifications. The construction of the terrace and the preparation of an area for settlement and for bearing the pressure of heavy structures (buildings and fortifications) in this manner was also a solution applied certain Alpine settlements.¹²⁸

¹²⁴ Jaeger 2014.

¹²⁵ Przybyła 2016, 302.

¹²⁶ Przybyła 2016, 303.

¹²⁷ Przybyła 2016, 303.

¹²⁸ Jaeger 2016a, 28.

Summing up, the careful selection of location of settlements in the mountainous landscape of the Polish Western Carpathians should be emphasized primarily. Areas with difficult access were chosen, which offered a natural defensive character on the one hand, and probably allowed control of specific parts of the landscape and mountain passes/trails, on the other hand. The fortifications in the above-described examples also reflect the pragmatism of the people who built them: their form and scale corresponded perfectly to the local topography of the area. In the majority of cases, the fortifications were combinations of wooden-earthen or wooden structures and ditches, universally applied throughout prehistory. The stone fortifications from Maszkowice are obviously exceptional in this context. They were made of the locally available rock material,¹²⁹ however, the manner of using the stone differs significantly from other examples recorded in this part of Europe during the Early Bronze Age. The stone structures and preparation of the building area (terrace) resemble examples in Alpine settlements, which in turn should seriously contribute to a deeper analysis of latitudinal relationships connecting the Carpathian Basin area with territories located to the north-west. This is particularly significant, because the most frequently presented studies mostly analyse longitudinal relationships between the Carpathian communities, reaching the “Aegean” zone on one side and the Nordic zone on the other.¹³⁰ In the context of increasingly frequent and more clearly visible evidence for the key role of copper from the Mitterberg area in producing objects characteristic of Carpathian metallurgy,¹³¹ the consequences of maintaining latitudinal relationships among the Danube and Tisza river communities seem to be an important valid research postulate.

Chronology

The chronology of fortified settlements in the Polish Western Carpathian area is based on typo-chronological findings of (rare) metal and ceramic sources material, as well as on a set of radiocarbon datings. We have the longest series of ¹⁴C dates in case of settlements of the cultural groups of Pleszów and

¹²⁹ Przybyła 2016, 297.

¹³⁰ E.g. Kristiansen/Larsson 2005.

¹³¹ Compare recently: Pernicka *et al.* 2016.

Otomani-Füzesabony in Trzcinica. A significantly smaller number of datings were obtained for the settlements in Trepcza and Maszkowice.

Only a few bronze objects were unearthed in the settlement in Trepcza as well as set of pottery that is not subject to precise typochronological evaluation. These finds and one ¹⁴C-date (a charcoal sample analysed in the laboratory in Kiev; Ki-6789, 3055±80 BP) only allow an approximate date at the turn of 17th to 18th century BC to be determined, the probable period of existence of the Early Bronze Age settlement at the site.¹³²

Overall, 73 radiocarbon datings were gained as a result of archaeological research at the site in Trzcinica. Both bones and charcoal were dated, each time with the use of material that did not raise any stratigraphic doubts.¹³³ Despite the postulated precision in selection of samples, the dated set included dates that differ from the expectations of the research authors. We should emphasize the necessary caution in adopting a specific interpretation of the results of radiocarbon analysis. In the set of 73 datings, charcoal was dated in as many as 50 cases (mainly in the laboratories in Kiev and Rome, in one case in Gliwice). In case of these datings, we need to take into account the possibility of ageing of the samples. The other 23 dated samples were performed on bones. The ¹⁴C-dates obtained were connected with the following stratigraphic units:

- a) layers of settlements of the Pleszów group,
- b) the layer in which finds of Pleszów and Otomani-Füzesabony groups were found (“cultural change” layer),
- c) Otomani-Füzesabony culture settlement layers,
- d) the road built during the Otomani-Füzesabony phase.

According to the interpretation presented by the research author, the phase of the Pleszów group settlement would cover the time from 2100 to 1650/1600 BC. Therefore, the dates from Trzcinica differ significantly from the much more universally accepted opinion that this group was established and developed in the territory of Lesser Poland at a later time (1900–1600 BC).¹³⁴ The phase of cultural change recorded in the pottery style in Trzcinica is dated approx. 1600 BC. The functioning of the older Otomani-Füzesabony

settlement is related to two radiocarbon dates that indicate approx. 1550 BC. The period of existence of a developed Otomani-Füzesabony settlement is marked by dates ranging from 1650 to 1400 BC. The functioning of the road related to the Otomani-Füzesabony settlement has been determined with ten radiocarbon dates for the period from 1600-1550 BC to 1350-1300 BC.¹³⁵ However, in the case of the last, the Otomani-Füzesabony road, we are only dealing with dates obtained from charcoal, so their ageing resulting from the thickness of the beams used for road construction is possible. The above-mentioned chronological findings concerning the settlement in Trzcinica cannot be currently verified. Until now, the very rich archaeological material (a huge collection of pottery) and precise information concerning the stratigraphic position of the dated samples have not been published.

Similar to the other above-described settlements, the settlement in Maszkowice, apart from the layers of the Early Bronze Age, also yielded evidence of the later habitation phases of the hill. The entire stratigraphic sequence at the site was divided into separate stratigraphic units, construction phases, of which the first three, labelled I, II and III respectively, correspond to the oldest period of occupation of the hill, i.e. the Early and Middle Bronze Age. The basis for the determined chronology of the site is a detailed stylistic analysis of pottery,¹³⁶ synchronised with specific chronological systems applied in the description of Otomani-Füzesabony cultural sources¹³⁷ and stratigraphic observations, verified by a few radiocarbon datings.¹³⁸ The oldest construction phase at the site (Maszkowice I) provided charcoal samples, the analyses of which indicated the 21st century BC. This result was rejected by the research authors as unreliable.¹³⁹ The chronology of stone fortifications was determined on the basis of results from dating samples obtained at the entrance zone to the settlement. The first two dates (1 of charcoal and 1 of grain) indicated the time between the 20th and 19th century BC. The following date (sample from an endocarp of cf. *Prunus*

¹³² Gancarski/Ginalski 2001, 312–315.

¹³³ Gancarski 1999, 147.

¹³⁴ Kadrow/Machnik 1997, 122; Jarosz 2015, 198.

¹³⁵ Gancarski 1999.

¹³⁶ Przybyła/Skoneczna 2011, 21–28; Przybyła *et al.* 2012, 231–235.

¹³⁷ Przybyła/Skoneczna 2011, 27.

¹³⁸ Przybyła 2016.

¹³⁹ Przybyła/Skoneczna 2011, 14; Przybyła 2016, 294.

spinosa) provided a result (3447±22 BP), which was interpreted as the basis for the conclusion that the gate and stone fortifications were built not later than approx. 1690 BC.¹⁴⁰ Moreover, the duration of construction phase Maszkowice II was estimated on the basis of dates from charcoal (2 samples) and grains (2 samples), obtained from the remains of dwelling structures. The dating results, including the stylistic analysis of pottery, allowed the framework of chronology of the Maszkowice II phase to be determined as the period from approx. 1700 to approx. 1620 BC.¹⁴¹ The oldest phase of habitation of the hill probably ended around 1500 BC, which is supposedly evidenced by two dates from charcoal and one date from grain, discovered in the layers related to the Maszkowice III phase.¹⁴² Therefore, in view of the radiocarbon datings, the oldest settlement on the hill in Maszkowice functioned for about 250 years (from approx. 1750 to approx. 1500 BC).¹⁴³ The site in Maszkowice provided spectacular source materials, deviating from the formerly known “standard”, in the form of remains of stone fortifications. In order to understand this phenomenon better and to gain confidence about its significance, it is necessary to expand the set of radiocarbon datings obtained from reliable short-lived samples with a specific stratigraphic location, as well as to extend the scope of archaeological research.

The role and function of fortified settlements

The development of fortified settlements during the Early Bronze Age spanned most of the European continent. However, throughout this extensive territory, one sees that this process varied in terms of intensity and duration. Individual cultural-geographic regions, such as the Carpathian Basin, can easily be deemed areas where fortified, often multi-strata settlements were the leading mode of habitation during the first half of the 2nd millennium BC, involving particular cultural and economic processes, with the consolidation of settlement and population at the fore.¹⁴⁴ On the other

hand, in some regions of the European continent settlements were never accompanied by fortifications, despite intense cultural development and stable patterns of economy, including long-range exchange; the latter case is best illustrated by the Nordic zone. Hence, the emergence and function of fortified settlements cannot be seen as a universal phenomenon, relying on allegedly similar features of social-cultural-economic systems, such as developed trade, including trade with remote locations, metalworking, controlled access to and exchange of certain strategic goods (e.g. metals, amber), and warfare. In each instance the presence of the above should be approached as a hypothesis requiring verification, both as regards the given settlement and the regional context.

Social hierarchy, prestige goods, and warfare are terms that denote the primary phenomena, which tend to be automatically linked either with the establishment and/or the function of fortified settlements in Europe. At the same time, the terms can be correlated with particular notions of the function and significance of fortified settlements, according to which they were:

- the most elaborate forms in the local settlement system, attesting to the increasing complexity of social structures and the emergence of the ruling elites = social hierarchy (on a microscale, i.e. at settlement level, and on a macroscale, i.e. across the region);
- central hubs in the existing network of contacts and exchange/trade (especially long-range ones) = prestige goods;
- installations of key military-defensive importance = warfare.

It should be noted that only in a few cases can the above approaches to the role of fortified settlements be treated as mutually exclusive. Given the available body of sources material, it would be rather more accurate to adopt the thesis that their functions and roles were interwoven.

Social hierarchy and fortified settlements

This issue is the most complex problem to be addressed in the context of studies on fortified settlements. For this reason, only some of its aspects will be discussed here. Most important is that there are two levels on which hierarchy of the communities in fortified settlements may be considered. The first could be termed a “micro-level”, while the other would constitute a “macro-level”. The

¹⁴⁰ Przybyła 2016, 298.

¹⁴¹ Przybyła 2016, 300.

¹⁴² Przybyła 2016, 301.

¹⁴³ Przybyła 2016, 294.

¹⁴⁴ Kienlin 2015; Jaeger 2016a.

micro-dimension denotes the settlement itself and its space, which in some cases had been structured in a manner suggesting specific internal divisions within the community that inhabited it. The scope of the macro-level includes the settlement and its place in the settlement system of a region, with people as its matter and active agents.

The division of the interior is postulated with reference to two settlements discovered in Poland. In Nowa Cerekwia the fortification seems to literally set apart sections of the site. However it must be admitted that this hypothesis needs to be verified, as the excavations were limited only to some parts of those sites (**Fig. 7**). In the case of Bruszczewo, a broad range of archaeological research reveals a different kind of division: boundaries were not demarcated by any physical means, but by certain kinds of crafts and, even more importantly, evidence of access to certain goods concentrated in one section, but not in the other. In Bruszczewo one of the latter goods was a specific kind of meat, which was found to have been unevenly distributed across the settlement.¹⁴⁵

Also, one should mention a particular group of sources, which demonstrate that the interior of settlements functioned as a sepulchral space. Both in Bruszczewo as well as in Nowa Cerekwia and Jędrychowice a number of storage pits contained human bones; standard burials within those settlements were discovered as well. Burials have been frequently encountered in sites of the Únětice culture. In this context, the example in Bruszczewo appears particularly suggestive. The male buried at the site, in the vicinity of the dwellings, must have performed heavy physical labour for a prolonged time, which resulted in deformations and disabilities of his body. It may be presumed that the singular and exceptional form of inhumation is related to the individual's quality of life, as determined by anthropological examination of the skeletal remains.¹⁴⁶ Interestingly enough, the case is at odds with the results brought by analysis of the diet and mobility of the deceased buried in pits in Únětice settlements in Central Germany: no correlation could be determined between the form of the burial, on the one hand, and the archaeological data and characteristics of the deceased, on the other.¹⁴⁷

The second approach to social hierarchy in the context of fortified settlements is concerned with their status in the region. In those instances where it can be determined on the basis of archaeological research (e.g. surface surveys), fortified settlements of the Early Bronze Age were the most complex forms in the existing settlement network. Thus far, the long-running programme of surface surveys and non-invasive research around Bruszczewo has not yielded any evidence of a similar site in its surroundings. Consequently, Bruszczewo has been traditionally attributed the leading role in the broader microregion of the so-called Kościan group of the Únětice culture. Together with barrows in Łęki Małe, the settlement in Bruszczewo was to evince the existence of a local political system, which encompassed a relatively extensive area.¹⁴⁸ In the recent years, attempts have been made to verify and revise these established assumptions. Research that recently began around Łęki Małe¹⁴⁹ will make it possible to test the hypothesis that presumes the existence of two convergent systems based on the paradigm: fortified settlement + barrow/barrows. Given the data obtained so far, it seems likely that in the two microregions along the axis of two river valleys there were two distinct structures: Bruszczewo + Przysieka Polska and Łęki Małe + an as yet unidentified fortified settlement. Both structures were probably surrounded by a network of minor settlements, and spaces, which were assigned value in a particular manner, manifested by numerous finds of single metal finds and bronze hoards. Perhaps a similar arrangement should be expected in the case of the settlement at Radłowice and the barrow in Szczepankowice in Silesia. Both sites are located at a relatively short distance of ca. 5 kilometres.¹⁵⁰

With respect to the discussed sites, there is a body of data, which confirms the special status of fortified settlements as places where diversification of communities was a dynamic process. The settlements themselves not only reflected the existing differences (at a macro-level), but also witnessed constant negotiations and modifications of social relationships between people who inhabited the space enclosed by the fortifications (on a microscale).

¹⁴⁵ Kneisel/Müller 2011.

¹⁴⁶ Jaeger 2012a.

¹⁴⁷ Knipper *at al.* 2015.

¹⁴⁸ Jaeger/Czebreszuk 2010; Jaeger 2012b.

¹⁴⁹ Joint Polish-German project conducted by Adam Mickiewicz University in Poznań and Christian-Albrechts University in Kiel.

¹⁵⁰ Lasak/Furmanek 2008, 126. 134 Fig. 9.

Prestige goods and fortified settlements

In most general studies of the Bronze Age, authors underline the importance of increased communication and the mobility of people and goods. In the reconstructed networks of exchange, fortified settlements are often ascribed the key role of “points on the routes”. Metals and amber are the chief sources which testify to that particular role played by a number of fortified settlements in the territory of Poland. Bronze objects have been discovered in all known sites, whereas the local production of metal has been confirmed only in Bruszczevo and Jędrychowice.¹⁵¹ The most comprehensive assortment of resources originated from the former site. Local metallurgists obviously possessed the technical know-how for metalworking and displayed a certain innovative potential, as the discoveries at the site itself and in the Bruszczevo microregion demonstrate. There are at least two finds showing that particular casting techniques were indeed known to local craftsmen. The first one, known from Bruszczevo, is a pin of the *Ösenkopfnadel* type found in one of the houses in the wetland area. The pin was produced using the cast-on technique. The head of the pin including the eyelet was cast over the shaft, and a piece of bronze sheet was wrapped around the eye. This technique began to be used for producing pins from the Middle Bronze Age onwards. The second find, astonishing in its technological complexity, is a dagger from the “princely grave” in Przysieka Polska.¹⁵² The blade and the hilt were cast together; the hilt is hollow, having been cast with a clay core. Bruszczevo likely functioned as a regional centre of metal production with continuous access to raw material and metallurgical knowledge. This is evident in the smooth conversion from fahlore to pure copper (*Reinkupfer*) without any break in metallurgical activity at the site,¹⁵³ but also by the possible production of items deposited in numerous hoards in the microregion (*Thüringer* rings/massive bracelets).¹⁵⁴ The scale of metalworking in Bruszczevo is reliable testimony to contacts that the local inhabitants maintained with areas, in which copper ore deposits were to be found. In turn, the kind and the quality of bronze prod-

ucts warrants the supposition that the settlement played a central role in the region, as a secondary centre of distribution of metal and metal objects.

Next to metal, the second strategic raw material of the Bronze Age is amber. It is found to be invariably present in fortified settlements located in present-day Poland; amber beads have been discovered in Bruszczevo, Nowa Cerekwia, Maszkowice and Trzcínica (Otomani-Füzesabony). As the material is fairly delicate and brittle, I am of the opinion that each find denotes a probable larger volume of the raw material, which had originally been used at the site. During that particular period amber became popular. Within the Únětice ecumene substantial amounts of amber reached the territory of today’s Czech Republic, transported from the shores of the Baltic Sea.¹⁵⁵ And it travelled even farther south. For the period in question, i.e. first half of the 2nd millennium BC, the presence of amber is often determined in funeral contexts and among finds in settlements (including fortified ones) throughout the Carpathian Basin.¹⁵⁶ That, however, was not the end of its journey, as demonstrated by numerous succinic finds from continental Mycenaean Greece.¹⁵⁷ Like none other, the material reflects the dynamics of interregional connections which, as many researchers argue, characterised Europe in the Early Bronze Age. It is highly probable that the lands of present-day Poland played a considerable role in the distribution of amber at that time. On the one hand, the coast of the Baltic Sea has the longest cultural tradition of regarding amber as a valuable, dating back to the Neolithic, and it is also where a substantial amount of the material came from.¹⁵⁸ On the other hand, that part of Europe was a major territory bridging Scandinavia and the Carpathian Basin, two regions which at the time remained in intense cultural interaction.¹⁵⁹ This “intermediary” role of that area is evidenced by numerous imports of metal objects from the South and stylistic features of pottery, as well as the most indicative hoards of the Koszider type discovered in western Pomerania, which contained both trans-Carpathian and Nordic forms (Fig. 14).¹⁶⁰ The available sources at

¹⁵¹ Gedl 1985a; Jaeger *et al.* 2015.

¹⁵² Schwenger 2004.

¹⁵³ Rassmann 2004; 2010.

¹⁵⁴ Jaeger/Czebreszuk 2010.

¹⁵⁵ Ernée 2013.

¹⁵⁶ Marková 2003; Jaeger 2016b.

¹⁵⁷ Czebreszuk 2011.

¹⁵⁸ Czebreszuk 2003.

¹⁵⁹ Kristiansen/Larsson 2005.

¹⁶⁰ Jaeger 2010b; 2016a, 126–128.

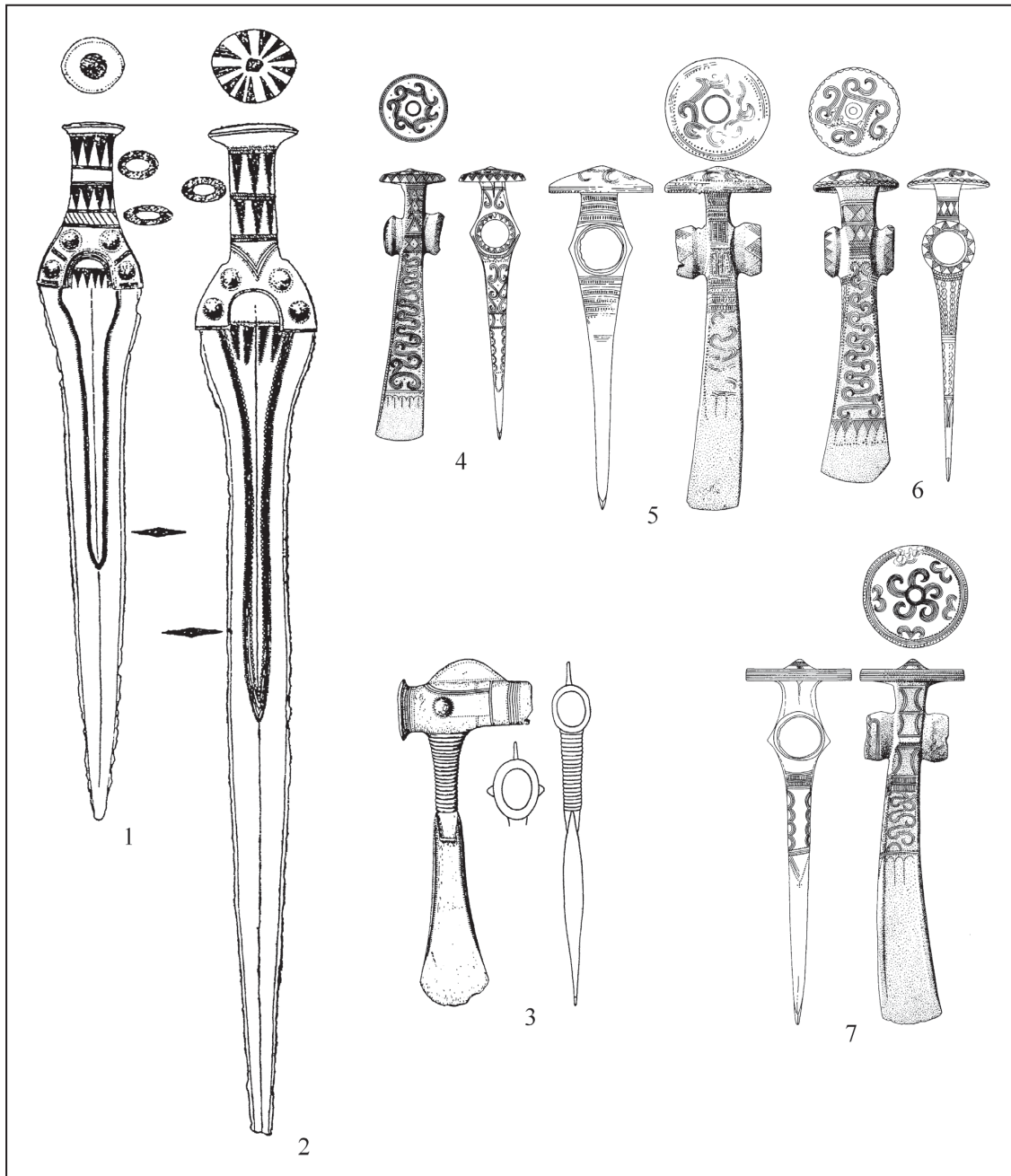


Fig. 14 Selected Carpathian Bronze Age imports on the area of today's Poland (after Jaeger 2016a)

this point warrant the assumption that communities inhabiting fortified settlements could have had a considerable role in organising and sustaining such relationships.¹⁶¹

In many cases, reconstructions show that the networks that likely existed in the Bronze Age linked very distant geographical regions whose cultures were remote as well, such as the coast of the Baltic and the Aegean.¹⁶² In an overwhelming majority of instances, the role of fortified settle-

ments is thereby much simplified, as virtually every time they are said to have participated in long-distance exchange. Due to incomplete archaeological exploration of most fortified settlements in Europe, at the very general level of debate the potentially consequential social and economic roles both on a micro scale (intra-regional) and on a macro scale (interregional) tend to be jointly attributed and are not differentiated. In other words, the very existence of a fortified settlement implies its participation in a more extensive, i.e. supralocal system of cultural and economic exchange. When the world system model is applied,

¹⁶¹ Makarowicz 2015.

¹⁶² E.g. Kristiansen/Larsson 2005.

along with the notion of peripheral zones, it is easy to arrive at a picture in which interrelations link all elements of the framework. This facilitates developing comprehensive narratives, in which individual regions where fortified settlements have been discovered become en masse an arena of far-reaching influences and active contributors to relationships of this kind. These overinterpretations are most often encountered in discussions concerning interactions between Central Europe and the Mycenaean culture, or more broadly the Aegean-Anatolian sphere. With regard to fortified settlements on Polish territory, the 1980s witnessed a trend towards searching for sources of information, which would make it possible to connect that remote corner of Europe with the Mediterranean.¹⁶³ Significantly, none of the sources quoted in support of such notions have stood the test of time. At present, however, there is an example which compels one to reconsider the question of individual fortified settlements taking part in developing long-range relationships.

As previously observed, the settlement of Maszkowice was enclosed with stone fortifications. In many sections, these structures were built using blocks of rock, which had been worked with considerable precision. For the author of the excavations, the defences in Maszkowice echo those structures encountered in Italy, Istria and, to a lesser extent, the Alpine sphere. The strategic location of the settlement meant numerous hindrances for traditional agriculture and husbandry, but it enabled the control of a number of mountain passes, which could have served as communication routes. Leaving aside the matter of the origins of construction patterns observed in Maszkowice the distinct nature and “alienness” of the complex fortifications should be emphasize. It seems that the site can be seen as the first ever reliable proof of the transfer of technological and architectural solutions from culturally and geographically remote areas.

Warfare and fortified settlements

The issue of warfare seems to be a logical element to take into account in studies on fortified settlements. Fortifications around a site are immediately and as it were by default, presumed to have been military structures with a defensive purpose.¹⁶⁴ In the light

of general knowledge, this presumption is correct. However, the available detailed data from individual sites in Poland offer grounds for a broader approach to the question of fortifications. A number of features suggests that they performed their military tasks effectively: their form is complex enough, a considerable range of structural solutions had been implemented, and on top of that the location and the type of fortification were chosen to dovetail with the terrain, which often provided natural defences in any case. Sites from Poland represent a substantial amount of source material:

- Bruszczewo: combination of a wide and deep ditch, three rows of palisades and also a wall and three additional lines of timber structures facing the lakeside;
- Nowa Cerekwia: combination of a palisade, two deep and wide ditches and a wall;
- Bruszczewo, Trzcinica, Trepcza, Maszkowice: the layout and the type of defences are aligned with the terrain;
- Maszkowice: massive stone walls, made from finished and well-fitted blocks of rock.

The military function and efficiency of the above examples is beyond any doubt. Still, one should point to other, complementary rather than alternative roles that artificial fortifications could have had. The necessity to do so is dictated by particular material sources from the sites:

- Bruszczewo: the existence of three lines of timber structures on the shoreline of the erstwhile lake adjacent to the settlement suggest possible hydrotechnical arrangement: their task was to hold the water that penetrated into the lowest-lying section of the settlement, where at least three huts were located; also, the only burial discovered to date at the site was situated there. In this context, the above-described example of the settlement in Radłowice seems to be important additional evidence for the ability of Early Bronze Age communities to handle specific hydrological conditions by constructing simple yet effective hydrotechnical/dewatering facilities.
- Nowa Cerekwia: the combination of several elements of the fortifications divided the settlement into separate parts. Archaeological features of the site and find contexts in them are distinct. The settlement had been divided into two parts, the smaller of which, the inner one, was protected by a ditch and a wall skirting its outer edge.

¹⁶³ Niesiołowska-Wędzka 1980, 65; Gediga 1983, 345.

¹⁶⁴ Przybyła *et al.* 2012, 247–248; Jaeger 2016a, 147–150.

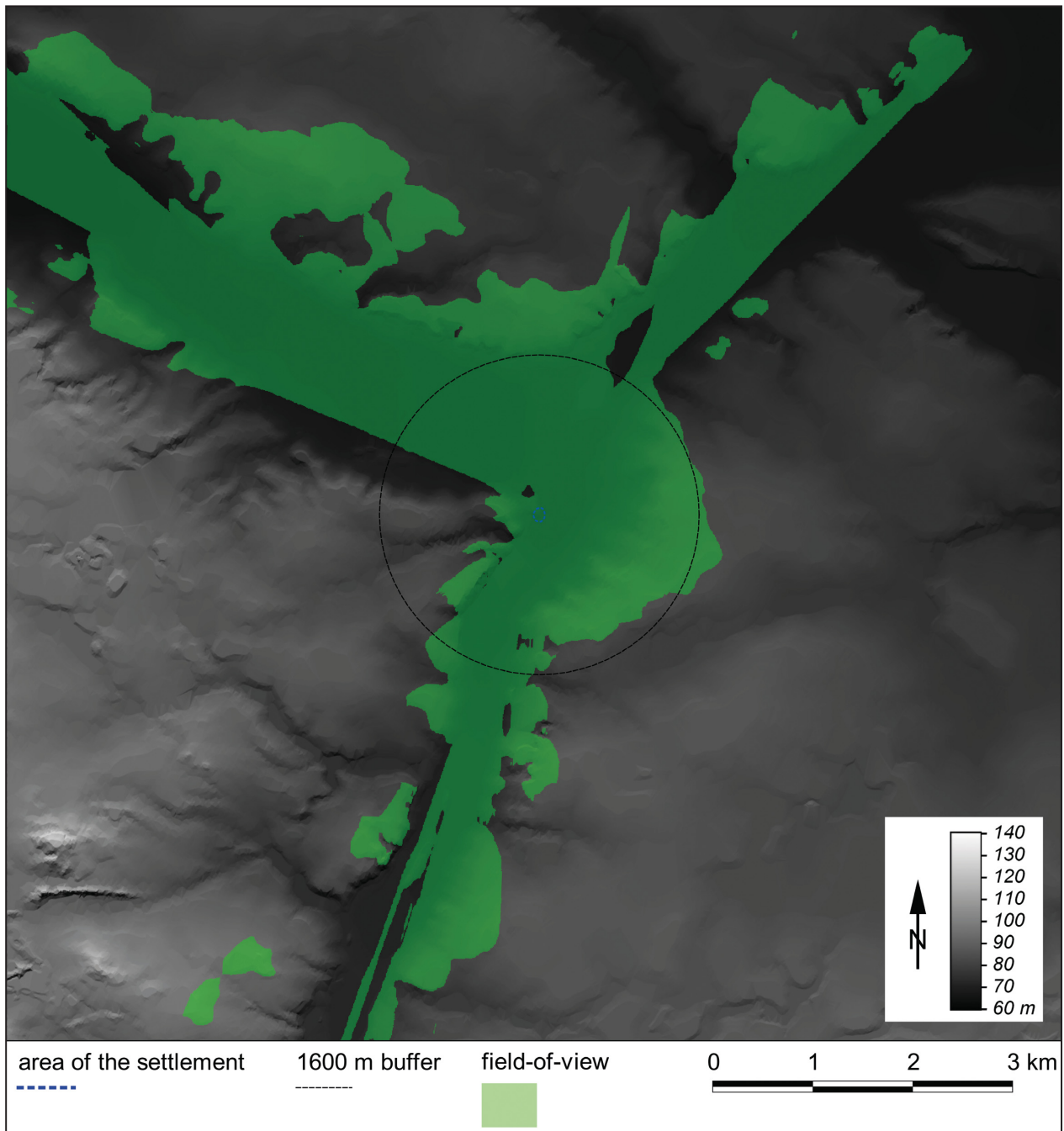


Fig. 15 Bruszczewo. Field-of-view map of the settlement and its surroundings (after Stróżyk 2015)

Consequently, although the number of contexts may be relatively few, they are nevertheless of substantial significance, as they bear out a more comprehensive function of certain types and forms of defences rather than merely a military one. In some cases, they may have been a measure employed to protect the settlement against adverse natural conditions (hydrotechnical function) or were put in place to separate particular zones of economic activity and, possibly, the inhabitants involved in such activities.

Finally, the very term of “military/defensive function” needs to be thoroughly considered. I do

not conceive it as a straightforward response to continuous physical threat from outside. Instead, it seems to reflect the awareness of the potentiality of such a threat and evince readiness to take countermeasures. Such readiness may have been maintained for a long period of time, as demonstrated by radiocarbon datings which confirm that one of the palisades in Bruszczewo had been kept in good repair and refurbished. Fortifications often display astonishingly complex forms and massive dimensions, clearly denoting a consolidated community characterised by organisational capacity and defensive determination. As such,

these structures were to some extent a deterrent. In this context, one should draw attention to the locations of the sites. On the one hand, there are the Otomani-Füzesabony settlements, situated in places overlooking mountain passes, which may be interpreted as designed to physically oversee sections of communication routes. Bruszczewo, on the other hand, suggests a different motivation and expediency. The settlement was located on a peninsula, which was cut off from its surroundings by a ditch. Although quite singularly, a settlement situated in that particular place was by no means a central point of the microregion, occupying a dominant elevation in the terrain. On the contrary, an analysis of the visibility of the site demonstrates that it was attempted to be “concealed” in the landscape, while ensuring the possibility of observing and controlling the surrounding area (Fig. 15).¹⁶⁵ It is a manifestation of a pragmatic approach often noted in ethnographic sources, according to which the most effective means of defence is “being invisible”.¹⁶⁶

Conclusions

In light of the existing knowledge, the fortified settlement was a significant element of cultural processes in the first half of the 2nd millennium BC in the territory of present-day Poland. These sites, investigated archaeologically to a different extent, provide evidence of the potential significance of specific settlements within wider phenomena characteristic for the period: the exchange of prestigious goods and hierarchisation of local communities. The massive and complex fortifications also allow them to be regarded as effective military systems with a defensive character. The presence of complex settlement structures is mainly notable in light of a certain remoteness of this part of Europe from the main culture-forming regions. Greater Poland, Silesia and the Polish part of the Western Carpathians appear to be peripheral areas in comparison to the roots of settlements of the Únětice and Otomani-Füzesabony cultures. It seems probable that the local communities took advantage of this specific location, on the one hand “fitting” into the already existing trails, while on the other hand establishing their

own local networks of connections, based on the access and potential possibility of controlling strategic raw materials: metals and amber.

References

- Butent-Stefaniak 1997
B. Butent-Stefaniak, Z badań nad stosunkami kulturowymi w dorzeczu górnej i środkowej Odry we wczesnym okresie epoki brązu (Wrocław/Warszawa/Kraków 1997).
- Cabalska 1977
M. Cabalska, Hillfort and fortified settlement of Lusatian Culture in Maszkowice, voivodship of Nowy Sącz. An attempt at a model reconstruction of social and cultural relations. *Archaeologia Polona* 18, 1977, 107–136.
- Chochorowski 1985
J. Chochorowski, Zur Chronologie und Rekonstruktion der Befestigungsanlage der frühbronzezeitlichen Burg Jędrychowice. In: *Gedl* 1985b, 45–55.
- Czebreszuk 2003
J. Czebreszuk, Amber on the Threshold of a World Career. In: J. M. Todd/I. Loze/C. W. Beck (eds.), *Amber in Archaeology. Proceedings of the International Conference on Amber in Archaeology, Talsi 2001 (Riga 2003)* 164–179.
- Czebreszuk 2004
J. Czebreszuk, Stratigraphien des zentralen Siedlungsareales und des Grabens/Stratygrafia strefy centralnej i fosy. In: *Czebreszuk/Müller 2004*, 79–92.
- Czebreszuk 2011
J. Czebreszuk, Bursztyn w kulturze mykeńskiej (Poznań 2011).
- Czebreszuk/Müller 2004
J. Czebreszuk/J. Müller (eds.), *Bruszczewo I. Ausgrabungen und Forschungen in einer prähistorischen Siedlungskammer Großpolens. Forschungsstand – Erste Ergebnisse – Das östliche Feuchtbodenareal/Badania mikroregionu osadniczego z terenu Wielkopolski. Stan badań – Pierwsze wyniki – Wschodnia, torfowa część stanowiska. Studien zur Archäologie in Ostmitteleuropa/Studia nad Pradziejami Europy Środkowej 2 (Poznań/Kiel/Rahden 2004)*.
- Czebreszuk/Suchowska 2010
J. Czebreszuk/P. Suchowska, Die Kulturschicht am östlichen Spornrand/Warstwa kulturowa w centralnej części stanowiska. In: *Müller et al. 2010*, 554–573.
- Czebreszuk et al. 2004a
J. Czebreszuk/B. Ducke/J. Müller/P. Silska, Siedlungsstrukturen und Siedlungstopographie/Struktura i topografia osady. In: *Czebreszuk/Müller 2004*, 71–77.
- Czebreszuk et al. 2004b
J. Czebreszuk/J. Müller/P. Silska, Forschungsgeschichte und Grabungsverlauf/Historia badań stanowiska. In: *Czebreszuk/Müller 2004*, 13–35.

¹⁶⁵ Stróżyk 2015, 395–398.

¹⁶⁶ Earle 2017, 9.

Czebreszuk *et al.* 2015

J. Czebreszuk/J. Müller/M. Jaeger/J. Kneisel, Absolute chronology of settlement. In: J. Czebreszuk/J. Müller / M. Jaeger / J. Kneisel (eds.), *Bruszczewo IV. Natural resources and economic activities of the Bronze Age people. Studien zur Archäologie in Ostmitteleuropa/Studia nad Pradziejami Europy Środkowej 14* (Bonn/Poznań 2015) 39–52.

Ducke/Müller 2004

B. Ducke/J. Müller, Die geomagnetische Prospektion/Prospekcja geomagnetyczna. In: Czebreszuk/Müller 2004, 61–68.

Earle 2017

T. Earle, Property in Prehistory. In: M. Graziadei/L. Smith (eds.), *Comparative Property Law. Global Perspectives* (Cheltenham 2017) 3–25.

Ernée 2013

M. Ernée, Bernstein und der Zusammenbruch der klassischen Aunjetitzer Kultur Böhmen. In: H. Meller/F. Bertemes/H. R. Bork/R. Risch (eds.), *1600 – Kultureller Umbruch im Schatten des Thera-Ausbruchs? 4. Mitteldeutscher Archäologentag vom 14.-16. Oktober 2011 in Halle* (Halle/Saale 2013) 453–467.

Gancarski 1999

J. Gancarski, Wehranlage vom Beginn der Bronzezeit in Trzcínica, Gde. Jasło. In: J. Gancarski (ed.), *Kultura Otomani-Füzesabony – rozwój, chronologia, gospodarka* (Krosno 1999) 131–144.

Gancarski 2002

J. Gancarski, Kultura Otomani-Füzesabony po północnej stronie Karpat. In: J. Gancarski (ed.), *Między Mykenami a Bałtykiem. Kultura Otomani-Füzesabony* (Krosno/Warszawa 2002) 103–124.

Gancarski 2006

J. Gancarski, *Trzcínica – Karpacka Troja* (Krosno 2006).

Gancarski/Ginalska 2001

J. Gancarski/J. Ginalska, Osada obronna z wczesnej epoki brązu w Trepczy koło Sanoka. In: J. Gancarski (ed.), *Neolit i początki epoki brązu w Karpatach polskich* (Krosno 2001) 305–318.

Gediga 1983

B. Gediga, Wczesnobrązowe osiedla obronne na ziemiach polskich. *Archeologia Polski* 28, 1983, 321–350.

Gedl 1964

M. Gedl, Wczesny i starszy okres epoki brązu w Górnym Śląsku. *Przegląd Archeologiczny* 16, 1964, 24–54.

Gedl 1985a

M. Gedl, Frühbronzezeitliche befestigte Siedlung in Jędrychowice und die Probleme der Nowa-Cerekiew Gruppe in Oberschlesien. In: Gedl 1985b, 27–43.

Gedl 1985b

M. Gedl (ed.), *Frühbronzezeitliche befestigte Siedlungen in Mitteleuropa. Materialien der internationalen Arbeitstagung vom 20. bis 22. September 1983 in Kraków* (Warszawa 1985).

Górski 2010

J. Górski, Wpływ transkarpackich kontaktów w początkach epoki brązu na sytuację kulturową w dorzeczu górnej Wisły. In: J. Gancarski (ed.), *Transkarpackie kontakty kulturowe w epoce kamienia, brązu i wczesnej epoce żelaza* (Krosno 2010), 223–248.

Jaeger 2010a

M. Jaeger, Stanowisko Pudliszki 5 w ramach domniemanej sieci wczesnobrązowych osad obronnych Wielkopolski/Untersuchungen zum Fundplatz 5 Pudliszki und seine Zugehörigkeit zum Netz frühbronzezeitlicher befestigter Siedlungen in Großpolen. In: Müller *et al.* 2010, 784–819.

Jaeger 2010b

M. Jaeger, Transkarpackie kontakty kultury Otomani-Füzesabony. In: J. Gancarski (ed.), *Transkarpackie kontakty kulturowe w epoce kamienia, brązu i wczesnej epoce żelaza* (Krosno 2010) 171–188.

Jaeger 2012a

M. Jaeger, Social Archaeology or Archaeology of Elites? Some Remarks on an Early Bronze Age Grave from Bruszczewo. In: T. L. Kienlin/A. Zimmermann (eds.), *Beyond Elites. Alternatives to Hierarchical Systems in Modelling Social Formations. Universitätsforschungen zur prähistorischen Archäologie 215* (Bonn 2012) 393–411.

Jaeger 2012b

M. Jaeger, Kościan Group of Unetice Culture and Fortified Settlement in Bruszczewo. Their Role in Micro- and Macro-regional Exchange. In: M. Jaeger/J. Czebreszuk/K. P. Fischl (eds.), *Enclosed Space-Open Society. Contact and Exchange in the context of Bronze Age Defensive Settlements in Central Europe. Studien zur Archäologie in Ostmitteleuropa/Studia nad Pradziejami Europy Środkowej 9* (Bonn/Poznań 2012) 167–176.

Jaeger 2014

M. Jaeger, Stone fortifications of the settlement in Spišský Štvrtok. A contribution to the discussion on the long-ranging contacts of the Otomani-Füzesabony culture. *Prähistorische Zeitschrift* 89 (2), 2014, 291–304.

Jaeger 2016a

M. Jaeger, Bronze Age Fortified Settlements in Central Europe. *Studien zur Archäologie in Ostmitteleuropa/Studia nad Pradziejami Europy Środkowej 17* (Bonn/Poznań 2016).

Jaeger 2016b

M. Jaeger, Amber Finds in Hungary. In: P. L. Cellarosi/R. Chellini/F. Martini/A. C. Montanaro/L. Sarti/R. M. Capozzi (eds.), *The Amber Roads. The Ancient Cultural and Commercial Communication between the Peoples. Proceedings of the 1st International Conference on Ancient Roads. Republic of San Marino, April 3-4, 2014. Milleni Studi de Archeologia Preistorica 13* (Rome 2016) 205–215.

Jaeger/Czebreszuk 2010

M. Jaeger/J. Czebreszuk, Does a periphery look like that? The cultural landscape of the Unetice culture's Kościan group. In: Kiel Graduate School "Human Development in

- Landscapes" (ed.), *Landscapes and Human Development: The Contribution of European Archaeology. Proceedings of the International Workshop "Socio-Environmental Dynamics over the Last 12.000 Years: The Creation of Landscapes (1st-4th April 2009)*. Universitätsforschungen zur prähistorischen Archäologie 191 (Bonn 2010) 217–235.
- Jaeger/Stróżyk 2015
M. Jaeger/M. Stróżyk, Remains of buildings inside the settlement and daub finds in the mineral zone. In: J. Czebreszuk/J. Müller (eds.), *Bruszczewo III. The settlement and fortification in the mineral zone of the site. Studien zur Archäologie in Ostmitteleuropa/Studia nad Pradziejami Europy Środkowej* 13 (Poznań/Bonn 2010) 285–297.
- Jaeger *et al.* 2015
M. Jaeger/ J. Czebreszuk/J. Müller/J. Kneisel, Absolute chronology of settlement. In: Czebreszuk *et al.* 2015, 227–234
- Janiak 2003
R. Janiak, *Grody kultury łużyckiej w międzyrzeczu górnej Warty i Prosnys (Łódź 2003)*.
- Jantzen *et al.* 2011
D. Jantzen/U. Brinker/J. Orschiedt/J. Heinemeier/J. Piek/K. Hauenstein/J. Krüger/G. Lidke/H. Lübke/R. Lampe/S. Lorenz/M. Schult/T. Terberger, A Bronze Age battlefield? Weapons and trauma in the Tollense Valley, north-eastern Germany. *Antiquity* 85, 2011, 417–433.
- Jarosz 2015
P. Jarosz, Osadnictwo kultury mierzanowickiej na stanowisku 6 w Zakrzowcu, pow. Wielicki. In: J. Górski/P. Jarosz (eds.), *Wielofazowe osady kultury mierzanowickiej w Targowisku i Zakrzowcu na Pogórzu Wielickim. Via Archaeologica. Źródła z badań wykopaliskowych na trasie autostrady A4 w Małopolsce* (Kraków 2015) 183–216.
- Kadrow/Machnik 1997
S. Kadrow/J. Machnik, *Kultura mierzanowicka. Chronologia, taksonomia i rozwój przestrzenny* (Kraków 1997).
- Kienlin 2015
T. L. Kienlin, *Bronze Age Tell Communities in Context – An Exploration into Culture, Society and the Study of European Prehistory. Part I* (Oxford 2015).
- Kneisel 2010
J. Kneisel, Die Grabungskampagnen Bruszczewo 2004–2006/Badania wykopaliskowe w Bruszczewie w sezonach 2004–2006. In: Müller *et al.* 2010, 93–166.
- Kneisel/Kroll 2010
J. Kneisel/H. Kroll, Die Holzanalysen aus dem östlichen Feuchtbodenareal/Analizy drewna z części torfowej stanowiska. In: Müller *et al.* 2010, 567–652.
- Kneisel/Müller 2011
J. Kneisel/J. Müller, Produktion, Distribution, Konsumtion und die Formation sozialer Unterschiede in frühbronzezeitlichen Gesellschaften Mitteleuropas. In: S. Hansen/J. Müller (eds.), *Sozialarchäologische Perspektiven: Gesellschaftlicher Wandel 5000–1500 v. Chr. zwischen Atlantik und Kaukasus. Internationale Tagung in Kiel* 15.–18. Oktober 2007 in Kiel. *Archäologie in Eurasien* 24 (Berlin 2011) 295–324.
- Kneisel *et al.* 2008
J. Kneisel/H. R. Bork/J. Czebreszuk/W. Dörfler/P. Grootes/J. N. Haas/K. U. Heußner/I. Hildebrandt-Radke/H. Kroll/J. Müller/N. Wahlmüller/T. Ważny, Bruszczewo – Early Bronze Defensive Settlement in Wielkopolska. Metallurgy, peat zone finds and change in the environment. In: J. Czebreszuk/S. Kadrow/J. Müller (eds.), *Defensive Structures from Central Europe to the Aegean in the 3rd and 2nd millennium BC. Studien zur Archäologie in Ostmitteleuropa/Studia nad Pradziejami Europy Środkowej* 5 (Bonn/Poznań 2008) 155–170.
- Knipper *et al.* 2015
C. Knipper/M. Fragata/N. Nicklisch/A. Siebert/A. Szécsényi-Nagy/V. Hubensack/C. Metzner-Nebelsick/H. Meller/K. W. Alt, A Distinct Section of the Early Bronze Age Society? Stable Isotope Investigations of Burials in Settlement Pits and Multiple Inhumations of the Únětice Culture in Central Germany. *American Journal of Physical Anthropology* 159(3), 2015, 496–516.
- Kristiansen/Larsson 2005
K. Kristiansen/T. B. Larsson, *The rise of Bronze Age society: travels, transmissions and transformations* (Cambridge 2005).
- Kunawicz-Kosińska 1985
E. Kunawicz-Kosińska, Osada obronna z wczesnej epoki brązu w Nowej Cerekwi. In: Gedl 1985b, 109–125.
- Langová/Danielisová 2013
M. Langová/A. Danielisová, Bestattungsritus der Aunjetitzer Kultur in Brandýs an der Elbe (Mittelböhmen): ‚Siedlungsbestattungen‘ – ein ganz normaler Teil des Bestattungsritus? In: N. Müller-Scheeßel (ed.), ‚Irreguläre‘ Bestattungen in der Urgeschichte: Norm, Ritual, Strafe...? Kolloquien zur Vor- und Frühgeschichte 19 (Bonn 2013) 239–250.
- Lasak 1988
I. Lasak, Wyniki badań wykopaliskowych na osadzie wielokulturowej w Radłowicach, gm. Domaniów, w roku 1987. *Śląskie Sprawozdania Archeologiczne* 30, 1988, 47–53.
- Lasak 1991
I. Lasak, Uwagi o pozostałościach konstrukcji drewniano-ziemnych na osadzie wczesnobrązowej (stan. 2) w Radłowicach. *Studia Archeologiczne* 20, 1991, 23–45.
- Lasak 1993
I. Lasak, Osada kultury unietyckiej w Radłowicach (stan. 22). *Studia Archeologiczne* 24, 1993, 67–84.
- Lasak 2001
I. Lasak, Epoka brązu na pograniczu śląsko-wielkopolskim, cz. II (Wrocław 2001).
- Lasak/Furmanek 2008
I. Lasak/M. Furmanek, Bemerkungen zum vermutlichen Wehrobjekt der Aunjetitzer Kultur in Radłowice in Schlesien. In: J. Czebreszuk/S. Kadrow/J. Müller (eds.), *Defensive Structures from Central Europe to the Aegean*

in the 3rd and 2nd millennium BC. *Studien zur Archäologie in Ostmitteleuropa/Studia nad Pradziejami Europy Środkowej* 5 (Bonn/Poznań 2008) 123–134.

Makarowicz 2015

P. Makarowicz, Karpackie osady obronne i dalekosiężne szlaki tranzytowe w II tys. BC – perspektywa północy. In: J. Gancarski (ed.), *Pradziejowe osady obronne w Karpatach* (Krosno 2015) 109–130.

Marková 2003

K. Marková, Austauschentwicklung in Karpatenbecken im Lichte der Bernsteinfunde (vorläufige Anmerkungen). In: C. Kacsó (ed.), *Bronzezeitliche Kulturerscheinungen im karpatischen Raum. Die Beziehungen zu den benachbarten Gebieten. Ehrensymposium für Alexandru Vulpe zum 70. Geburtstag. Baia Mare, 10.–13. Oktober 2001* (Baia Mare 2003) 339–352.

Molak 2008

J. Molak, Uwagi w sprawie datowania grupy nowocerekwiańskiej. *Sprawozdania Archeologiczne* 60, 2008, 129–144.

Molak 2010

J. Molak, Oddziaływania madziarowsko-wietrzowskie na obszarze południowo-zachodniej Polski a przynależność kulturowa stanowisk tzw. grupy nowocerekwiańskiej. In: J. Gancarski (ed.), *Transkarpackie kontakty kulturowe w epoce kamienia, brązu i wczesnej epoce żelaza* (Krosno 2010) 273–311.

Müller 2004

J. Müller, Die östlichen Feuchtbodenareale: Stratigraphien und Architektur/Strefa torfowa stanowiska: stratygrafia i architektura. In: Czebreszuk/Müller 2004, 99–134.

Müller/Czebreszuk 2003

J. Müller/J. Czebreszuk, Bruszczewo – eine frühbronzezeitliche Siedlung mit Feuchtbodenerhaltung in Großpolen. Vorbericht zu den Ausgrabungen 1999–2001. *Germania* 81, 2003, 443–480.

Müller/Kneisel 2010

J. Müller/J. Kneisel, Bruszczewo 5: Production, distribution, consumption and the formation of social differences. In: Müller *et al.* 2010, 756–782.

Müller *et al.* 2010

J. Müller/J. Czebreszuk/J. Kneisel (eds.), Bruszczewo II. Ausgrabungen und Forschungen in einer prähistorischen Siedlungskammer Großpolens/Badania mikroregionu osadniczego z terenu Wielkopolski. *Studien zur Archäologie in Ostmitteleuropa/Studia nad Pradziejami Europy Środkowej* 6 (Bonn/Poznań 2010).

Niesiołowska-Wędzka 1974

A. Niesiołowska-Wędzka, Początki i rozwój grodów kultury łużyckiej (Wrocław/Warszawa/Kraków/Gdańsk 1974).

Niesiołowska-Wędzka 1980

A. Niesiołowska-Wędzka, Procesy urbanizacyjne w kulturach wczesnej i środkowej epoki brązu na terenie Kotliny Karpackiej w świetle oddziaływań kultur kręgu egejsko-balkańskiego. *Archeologia Polski* 25, 1980, 29–77.

Pernicka *et al.* 2016

E. Pernicka/B. Nessel/M. Mehofer/E. Safta, Lead Isotope Analyses of Metal Objects from the Apa Hoard and Other Early and Middle Bronze Age Items from Romania. *Archeologia Austriaca* 100, 2016, 57–86.

Pieczyński 1985

Z. Pieczyński, Umocnienia ochronne osady z wczesnej epoki brązu w Bruszczewie, woj. Leszczyńskie, stan. 5. In: *Gedl* 1985b, 167–180.

Przybyła 2016

M. Przybyła, Early Bronze Age stone architecture discovered in the Polish Carpathians. *Archäologisches Korrespondenzblatt* 46 (3), 2016, 291–308.

Przybyła/Skoneczna 2011

M. Przybyła/M. Skoneczna, The fortified settlement from the Early and Middle Bronze Age at Maszkowice, Nowy Sącz district (Western Carpathians). Preliminary results of studies conducted in the years 2009–2012. *Recherches Archéologiques NS* 3, 2011, 5–66.

Przybyła *et al.* 2012

M. Przybyła/M. Skoneczna/A. Vitoš, Interregional contacts or local adaptation? Studies on the defensive settlement from the Bronze and Early Iron Age in Maszkowice (Western Carpathians). In: M. Jaeger/J. Czebreszuk/K. P. Fischl (eds.), *Enclosed Space - Open Society. Contact and exchange in the context of Bronze Age Defensive Settlements in Central Europe. Studien zur Archäologie in Ostmitteleuropa/Studia nad Pradziejami Europy Środkowej* 9 (Bonn/Poznań 2012) 227–276.

Puziuk 2010

J. Puziuk, Konstrukcje obronne w grodach kultury łużyckiej. *Materiały Archeologiczne* 38, 2010, 5–33.

Rassmann 2004

K. Rassmann, Die Bemerkungen zu den chemischen Analysen von Kupferartefakten aus der Siedlung von Bruszczewo/Uwagi na temat analiz chemicznych wyrobów miedzianych z Bruszczewa. In: Czebreszuk/Müller 2004, 257–262.

Rassmann 2010

K. Rassmann, Neue chemische Analysen von Kupferartefakten aus der Siedlung von Bruszczewo/Nowe analizy chemiczne wyrobów miedzianych z osady w Bruszczewie. In: Müller *et al.* 2010, 702–712.

Romanowska-Grabowska 1991

O. Grabowska-Romanowska, Gród halsztacki w Izdebnie gm. Rogowo (woj. bydgoskie). In: J. Jaskanis (ed.), *Prahistoryczny gród w Biskupinie. Problematyka osiedli obronnych na początku epoki żelaza* (Warszawa 1991) 217–223.

Sarnowska 1969

W. Sarnowska, *Kultura unietycka w Polsce* (Wrocław 1969).

Schefzik 2006

M. Schefzik, Frühbronzezeitliche Gebäudeformen in Süddeutschland. Mit einer Gegenüberstellung des Formenbestandes des östlich angrenzenden Kulturlandschaften.

In: W. Blajer (ed.), *Z badań nad osadnictwem epoki brązu i wczesnej epoki żelaza w Europie Środkowej* (Kraków 2006) 139–158.

Schwenzer 2004

S. Schwenzer, *Przysieka Polska – Ein Grabfund in der Umgebung der frühbronzezeitlichen Siedlung von Bruszczewo/Przysieka Polska – znalezisko grobowe w sąsiedztwie osady w Bruszczewie*. In: Czebreszuk/Müller 2004, 317–324.

Stróżyk 2015

M. Stróżyk, *Early Bronze Age architecture. An attempt at a virtual reconstruction of the Bruszczewo defensive settlement*. In: Czebreszuk/Müller 2010, 383–404.

Stuchlík 2000

S. Stuchlík, *Nadzemní kúlové stavby ze starší doby bronzové na Moravě*. *Pravěk* NR 10, 2000, 219–250.

Stuchlík/Stuchlíková 1999

S. Stuchlík / J. Stuchlíková, *Die Erforschung des Věteřover Rondells in Šumice*. In: J. Bátora/J. Peška (eds.), *Aktuelle Probleme der Erforschung der Frühbronzezeit in Böhmen und Mähren und in der Slowakei* (Nitra 1999) 169–182.

Szybowicz 1985

B. Szybowicz, *Pochówki grupy nowocerekwiańskiej*. In: *Gedl* 1985b, 93–106.

Mateusz Jaeger, Fortified Settlements of the Early Bronze Age in Poland

The dynamics of development of Bronze Age fortified settlements in the territory of present-day Poland reflects a general trend visible in other regions of Europe. The first period when relatively few defensive settlements were built was the first half of the 2nd millennium BC. However, intensification of the discussed phenomenon can only be noticed with the development of the Lusatian culture. The older development stage of fortified settlements in Poland is characterised by a significantly lower number of sources. The sites identified until now form a small group of settlements, clearly connected with two cultural circles. The four settlements which have been discovered in Greater Poland and Silesia so far should be linked with local groups of Únětice culture. In south-eastern Poland, in the Polish part of the Western Carpathians, there are three known sites, which are the result of northern expansion of Otomani-Füzesabony culture settlements, as well as the development of local communities of Mierzanowice culture. The text aims at detailed description of archaeological sources concerning particular features and aspects of functioning of fortified settlements. Moreover the collected information will serve to attempt to locate the discussed settlements in wider contexts regarding the roles which are most frequently assigned to the archaeological sites of this kind.

Mateusz Jaeger, Befestigte Siedlungen der Frühbronzezeit in Polen

Die Dynamik der Entwicklung der bronzezeitlichen befestigten Siedlungen auf dem Gebiet des heutigen Polen spiegelt einen allgemeinen Trend wider, der auch in anderen Regionen Europas sichtbar wird. In der ersten Periode, in der ersten Hälfte des 2. Jts. v. Chr., wurden nur relativ wenige defensive Siedlungen errichtet. Eine Verstärkung des diskutierten Phänomens kann erst mit der Entwicklung der Lausitzer Kultur festgestellt werden. Die ältere Entwicklungsphase der befestigten Siedlungen in Polen ist durch eine deutlich geringere Anzahl an Quellen gekennzeichnet. Die bislang identifizierten Fundorte bilden eine kleine Gruppe von Siedlungen, die klar mit zwei Kulturkreisen zu verbinden ist. Die vier bisher in Großpolen und Schlesien entdeckten Siedlungen können mit lokalen Gruppen der Únětice-Kultur verbunden werden. In Südostpolen, im polnischen Teil der Westkarpaten, sind drei Fundorte bekannt, die sowohl ein Ergebnis der nördlichen Ausbreitung der Siedlungen der Otomani-Füzesabony-Kultur als auch eine Entwicklung der lokalen Gemeinschaften der Mierzanowice-Kultur sind. Der Beitrag zielt auf eine detaillierte Beschreibung der archäologischen Quellen in Hinblick auf die besonderen Eigenschaften und Aspekte der Funktion befestigter Siedlungen ab. Darüberhinaus dienen die gesammelten Informationen dazu, die diskutierten Siedlungen in einen weiteren Kontext bezüglich der Funktionen zu stellen, die am häufigsten archäologischen Fundplätzen dieser Art zugeschrieben werden.