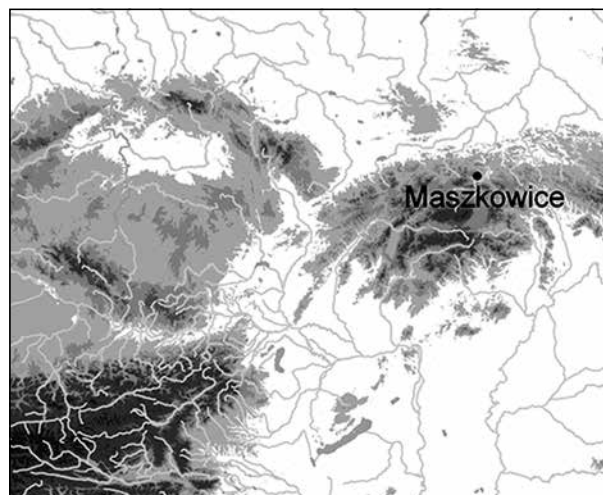


## EARLY BRONZE AGE STONE ARCHITECTURE DISCOVERED IN THE POLISH CARPATHIANS

There has been a growing interest over recent decades in investigating past societies as integral units of trade or social network, rather than as independent socio-cultural systems. Starting from Marxists and world-system approaches in the last two decades of the 20<sup>th</sup> century, through evolutionary studies on cultural transmission, to current research applying analytical tools like agent-based modelling or network analyses, another tendency possibly can be observed, namely a change of the unit of investigation – from civilizations and archaeological cultures towards single communities or even individual agents. In consequence, while the traditional culture-historical approach focused on similarities within archaeological cultures and differences between them, modern studies on cultural contacts in prehistory emphasise the uniqueness and individual fate of investigated societies. Similarities of cultural traits are seen as stemming from the participation of a given community in more or less flexible communication network rather than its affiliation with a fixed and geographically limited cultural or ethnic tradition. From this theoretical perspective, particularly interesting seem to be archaeological sites that clearly stand out from the cultural pattern considered »typical« for a given region. One of such unusual places is the Bronze and Iron Age hillfort at Maszkowice (pow. nowosądecki; woj. małopolskie/PL) in the Western Carpathians (fig. 1). This paper aims to present the latest discoveries made at the site by the team from the Uniwersytet Jagielloński in Kraków.



**Fig. 1** Localization of the site at Maszkowice (woj. małopolskie/PL) in the Western Carpathians. – (Map M. S. Przybyła).

### THE SITE – GENERAL ACCOUNT AND STATE OF RESEARCH

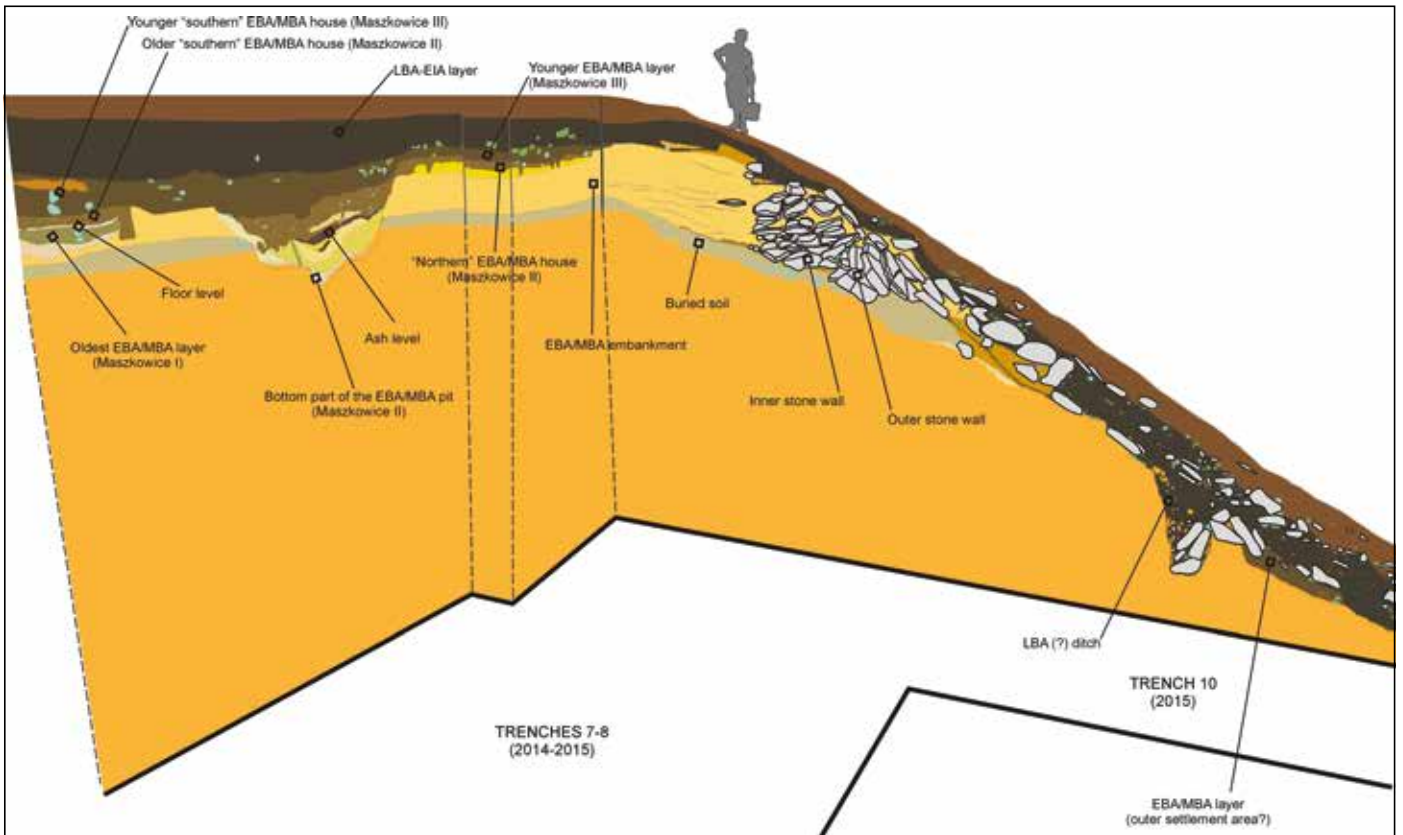
Similarly to some other Carpathian hillforts, the site at Maszkowice was described for the first time at the very beginning of the 20<sup>th</sup> century, when the first systematic attempts to catalogue archaeological findings were undertaken in Western Lesser Poland (Demetrykiewicz 1907). However, the place was known to the local community as a »stronghold« (»grodzisko«) at least as early as the 16<sup>th</sup> century, and since the 19<sup>th</sup> century it has been called Zyndram's Hill (with reference to Zyndram of Maszkowice – a Polish knight and royal official from the 14<sup>th</sup>/15<sup>th</sup> century) and believed to be a ruin of a medieval castle. According to oral tradition, massive stone walls were still visible at the hilltop in the 18<sup>th</sup> or 19<sup>th</sup> century (»some generations ago«). In the 1960s and 1970s the site was excavated by Maria Cabalska from the Uniwersytet Jagielloński in Kraków (e.g. Cabalska 1977). This old fieldwork, despite some methodological flaws, provided a vast collection of finds. Preliminary studies on the materials have clearly shown that the location has a huge poten-



**Fig. 2** Location of the site on the top of Zyndram's Hill in Maszkowice (woj. małopolskie/PL). Trenches of 2010-2015 (red) and the approximate run of the stone wall (dotted line) are marked. – (Map M. S. Przybyła; background geoportal.gov.pl).

tial and needs to be revisited (Madyda-Legutko 1996, 19-23; Przybyła 2009, 230-249). Therefore, a new archaeological project was launched at the site in 2009. Apart from small-scale excavations, supplemented with a range of environmental analyses (geochemical and microstratigraphic investigations, palaeobotany, archaeozoology), it also encompasses the survey programme (geophysics, fieldwalking) and further studies on the materials from Cabalska's excavations.

The site in Maszkowice is located at the northern edge of the łącko Basin, which is in fact a small widening of the upper Dunajec valley, about 7 km long. The valley bottom is covered by fertile alluvial soils, which must have made the łącko Basin a relatively attractive area for prehistoric settlement and agriculture, the highest such enclave within this part of the Western Carpathians (Przybyła/Skoneczna/Vitoš 2012; Korczyńska/Cappenberg/Kienlin 2015, 233). Geographical location is one of the reasons for which the Maszkowice site is very interesting from the archaeological point of view. The settlement lies at the junction of important communication routes leading through the Carpathians. At the same time, however, its immediate vicinity is confined to a narrow intermountain valley, which makes it a kind of an isolated small world – ideal object for palaeoecological studies. Another interesting feature of the site is its defensive character. The flat top of Zyndram's Hill is elevated c. 50 m above the bottom of the valley. Its western and southern slopes are very steep, almost inaccessible, whilst from the east and north the plateau at the hilltop was protected with man-made fortifications (**fig. 2**). The inner area of the settlement at the top of Zyndram's Hill is very limited, and amounts to c. 5000 m<sup>2</sup>.



**Fig. 3** Maszkowice (woj. małopolskie/PL). Simplified stratigraphy of the area unearthed in 2014-2015. – (Illustration M. S. Przybyła).

The site has a long history of occupation. During the old excavations, which were focused on the central and northern part of the plateau, mainly the remains of the younger settlement phase were discovered (Cabalska 1977). These comprise relatively shallow pits (about 120 features), clustered in the central part of the settlement, as well as a c. 50-80 cm thick, black cultural layer stretching along the northern and eastern edge of the plateau. The oldest artefacts originating from the bottom part of this »upper« package of occupational levels, date back to the Late Bronze Age, around 1000-900 BC. These, however, which were retrieved from the ceiling of the layer, just beneath the topsoil, originate from the Pre-Roman Iron Age (c. 200-50 BC). At first glance, the »upper« layer seems to be more or less homogenous, but hints such as the stratigraphic order of artefacts, different levels of ceilings of the postholes and regularities in their arrangement, as well as the presence of stone pavements, allow us to distinguish four stages of building activity within the younger occupational phase (building phases Maszkowice VI-VII; Przybyła/Skoneczna 2014).

Whilst M. Cabalska focused her fieldwork on the central part of the site, the new trenches were opened close to the eastern edge of the plateau. During four campaigns (2010-2012, 2014) we explored an about 2m thick package of layers, particularly well preserved in this part of the site (fig. 3). Beneath the layer connected with the younger occupational phase, at the depth of about 100cm, we came across a complicated stratigraphic arrangement of brownish layers, being the remains of an Early Bronze Age settlement (Przybyła/Skoneczna 2011). Currently, thanks to some stratigraphic premises as well as the results of spatial

analysis we are able to divide the relicts of this older settlement into three building phases (Maszkowice I-III), dated between c. 1750 and 1500 BC. This dating means, among other things, that there is a gap of about 500 years between the two main occupational phases.

Already in 2011 we realised that on the eastern slope of the hill, just down the Early Bronze Age layers, there are the remains of stone fortifications of some kind, but until recently we have not had an opportunity to investigate them in more detail. To change this situation was the goal of our campaign in August 2015.

## THE DEVELOPMENT OF THE EARLY BRONZE AGE FORTIFIED VILLAGE

According to the results of our surveys, the hills surrounding the Łącko Basin were probably not inhabited permanently during the Neolithic and at the beginning of the Bronze Age (Przybyła/Skoneczna 2014). Moreover, as far as we currently know, the fortified village on Zyndram's Hill was the only settlement point in the region throughout the whole of the Early Bronze Age. This premise, combined with the fact that none of the decorated vessel fragments from the older occupational phase belong to the local pottery tradition (which is cord-decorated ware of the Mierzanowice culture) allows us to assume that we are dealing with a site founded and occupied by a group of migrants from behind the Carpathians. Their origin is a more complicated question, which I will try to address later.

The choice of Zyndram's Hill as a place for settlement was far from random. It is the lowest promontory along the whole northern edge of the Łącko Basin, located directly at its midpoint; the naturally defensive one but also offering the best access to fresh water and to the Pleistocene terrace covered with alluvial soils and, additionally just, above the level affected by thermal inversion. To put it in a nutshell – it offered the best trade-off between the benefits of living on a high elevated spot and its economic costs.

In the Early Bronze Age the top of Zyndram's Hill was not as flat as today, but was quite narrow, similarly to the neighbouring promontories. The original peak had been levelled by the first settlers, who made use of the material obtained this way (upper part of the hill is built of loess-like sediment) for erecting a construction terrace at the eastern and northern slope. This produced a completely flat surface, which later was densely built-up. This first stage of the settlement occupation, encompassing a significant transformation of the natural landform and the erection of sophisticated fortifications corresponds with phase Maszkowice I in the internal periodization of the site.

One of the two main elements of the terrace is a clay embankment recorded underneath the older occupational levels. Within the area investigated in 2010-2015, its width fluctuates between c. 5 and 9 m. The embankment lies directly on the layer of buried soil: clayish, grey in colour, sloping to the east at an angle of about 15 degrees. Within it, especially in its ceiling part, few Early Bronze Age shards were found, as well as concentrations of charcoal. Two samples of soil were taken (one from the structure, which may be interpreted as the trace of a tree root), which provided radiocarbon dates from around the 21<sup>st</sup> century BC (Poz-39413, AMS,  $3660 \pm 35$  BP, 2141-1937 BC  $2\sigma$ ; Poz-39414, AMS,  $3730 \pm 40$  BP, 2231-2013 BC  $2\sigma$ ). Due to the nature of the sampled material (charred wood), though, they can be considered as slightly over-aged. The clay embankment reaches its maximal thickness (about 1.5 m) at the eastern extremity, where it leans against the inner facade of a retaining wall. Both constructions are integrally connected, and were built simultaneously, probably layer after layer, prior to the actual start of the settlement activity.

The retaining wall itself is combined of some elements. Its inner facade has the form of a dry wall, made of a single row of sandstone slabs, weighting approx. 20-40 kg each (35-55 cm × 20-30 cm × 12-20 cm – measurements were taken for the first 100 stones). Currently, the inner wall is preserved up to the height of 1.2 m, but originally it was probably as high as 1.9-2 m. Its outer face also consists of only one row of stone





**Fig. 4** Maszkowice (woj. małopolskie/PL). Northern part of the trench 8 (2015), fifth level of documentation: the lowest part of the inner wall and large stones of the outer face are visible. – (Photo A. Maślak).

blocks, although they are much bigger than in the case of the inner facade (figs 4-5). Their dimensions are 81 cm × 49 cm × 21 cm on average, but some blocks are more than 100 cm long and must weigh no less than 200 kg. Whilst the length and thickness of the slabs vary more or less, its width is rather constant (40-57 cm). Unlike the stones forming the inner wall, blocks of the outer facade seem to be fitted to each other, and some of them are dressed to the form of cuboids (fig. 6). Within the segment of the fortifications excavated in 2015, four to five courses of massive blocks constituting the outer face were discovered *in situ*. But taking into account the height of the clay embankment, as well as the number of large sandstone slabs found up to 5-6 m down the slope, and which must have tumbled from the wall, one may safely assume that the original construction was about 2.7-3 m high.

The space about 1 m wide between the outer and inner facades was filled mainly with sandstone slabs supplemented by clay. Stones constituting subsequent layers of the fill (in terms of size the same as those from the inner face) are arranged rather irregularly but close, no more than 10 cm from each other. Among regular stones forming the bottom part of the construction, some long and narrow boulders were found, oriented transversely to the course of the wall and anchored in the outer facade. Their function is difficult to explain, although it is possible that they were supposed to tie the outer face with the inner part of the wall.



**Fig. 5** Maszkowice (woj. małopolskie/PL). Lower levels of the stone construction during excavations. – (Photo M. S. Przybyła).



**Fig. 6** Maszkowice (woj. małopolskie/PL). Examples of quasi-ashlar masonry: Relatively small blocks, which originate probably from the outer face of the wall, were reused in the third building phase (16<sup>th</sup> century BC) for sealing the former gate passage. – (Photo M. S. Przybyła).

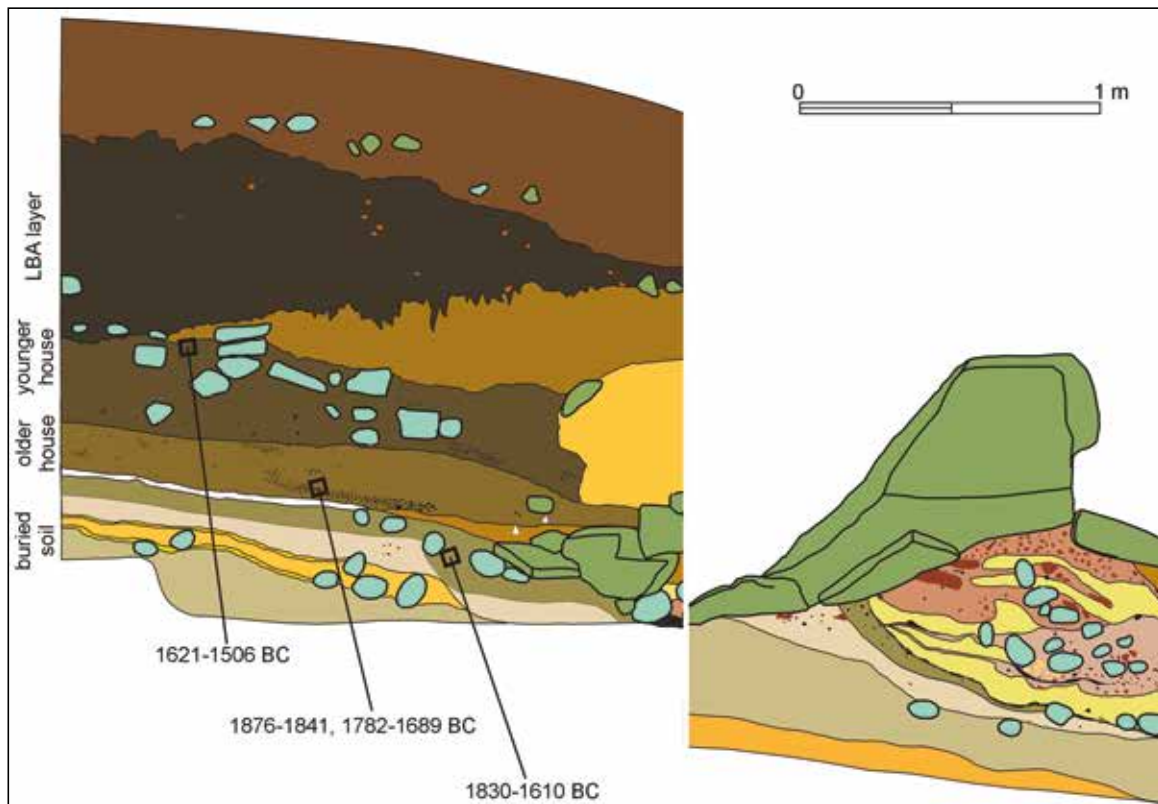


**Fig. 7** Maszkowice (woj. małopolskie/PL). Sandstone slabs limiting the passage of the gate, and the brownish occupational level between them. Few pottery pieces of the Early Bronze Age were found within this layer. In the left-bottom corner of the picture one of the huge and regularly dressed stones of the outer face is visible. – (Photo M. S. Przybyła).

Boulders originating from the site area or from the nearby stream are about 10 % of the building material. The rest constitutes local sandstone cut probably at the basis or on the western slope of Zyndram's Hill. It is worth stressing that the ground on which the entire construction was built was not particularly stable. In this part of the hill the bedrock is covered by several metres of a loess deposit, so that the retaining wall must have been laid on the original terrain surface. It is probably the reason why the layer of buried soil is saturated densely in its ceiling part with a large amount of small pebbles, which probably were expected to reinforce the ground underneath the terrace and adjacent stone fortifications. The pressure of the wall on the ground must have been immense, which in turn was necessary to hold the earth terrace. We may carefully assume that 1 m of the stone wall, which is in total about 1.9-2 m wide, could weigh as much as 6 t.

During the excavations in 2012, we discovered a large, vertically set stone slab, beneath a clayish layer which was preliminary interpreted as a part of some kind of hearth. Fieldwork in 2015 has revealed, however, that we are dealing here with a larger construction, apparently designed as a gate (fig. 7). The passage



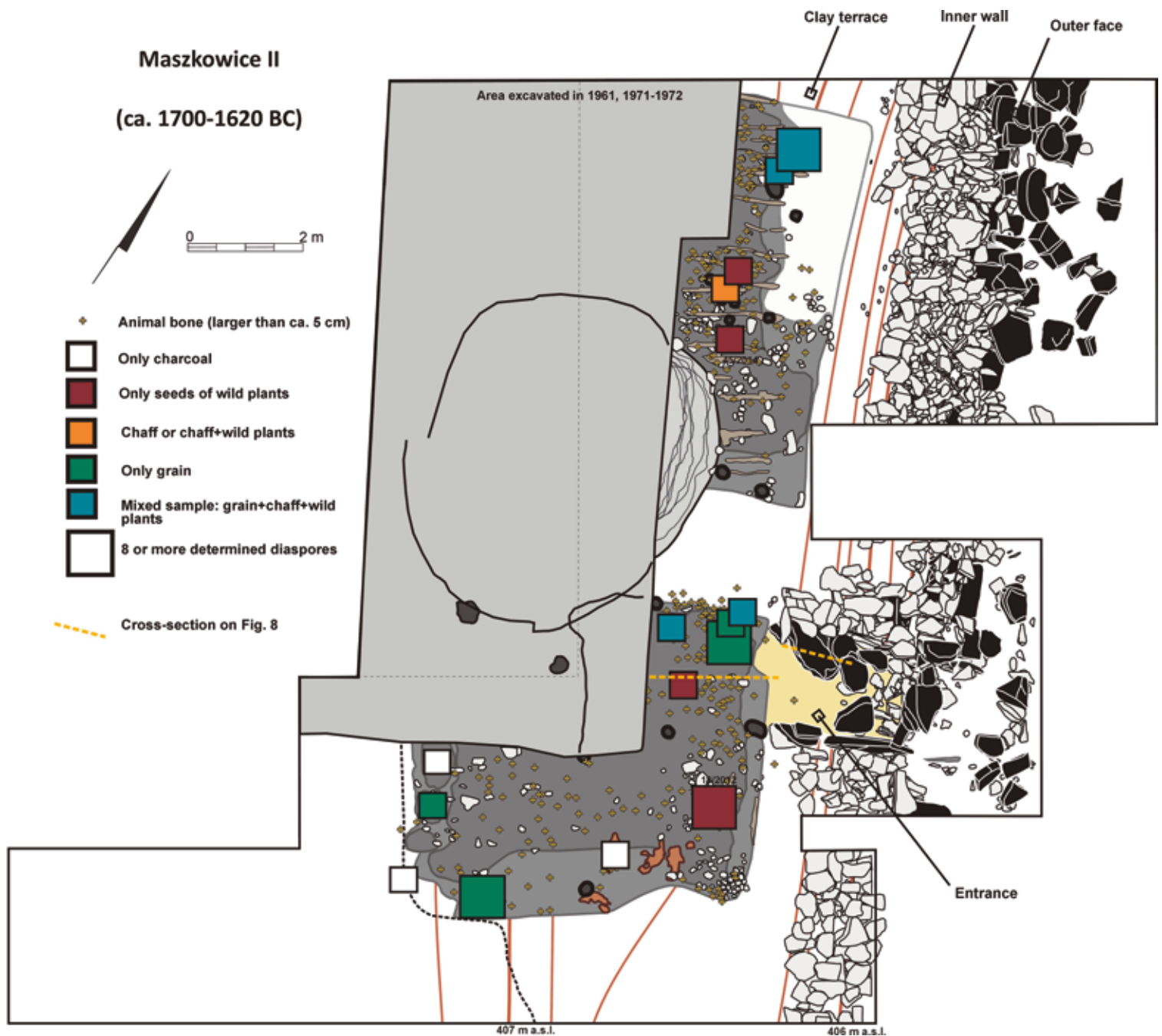


**Fig. 8** Maszkowice (woj. małopolskie/PL). Cross-section of the gate (western part) and adjacent occupational levels. Arrows point at the places from where samples for radiocarbon dating were collected. – (Illustration M. S. Przybyła).

is 145-150cm wide and is limited by walls built of sandstone slabs on both sides. The northern wall is built of four slabs, and measures 3.65 m. The southern, shorter one is built of three slabs, and is 2.67 m long. Originally, the slabs were at least 1.5 m high, and some of them could even reach 1.9 m, but currently they are only partially preserved.

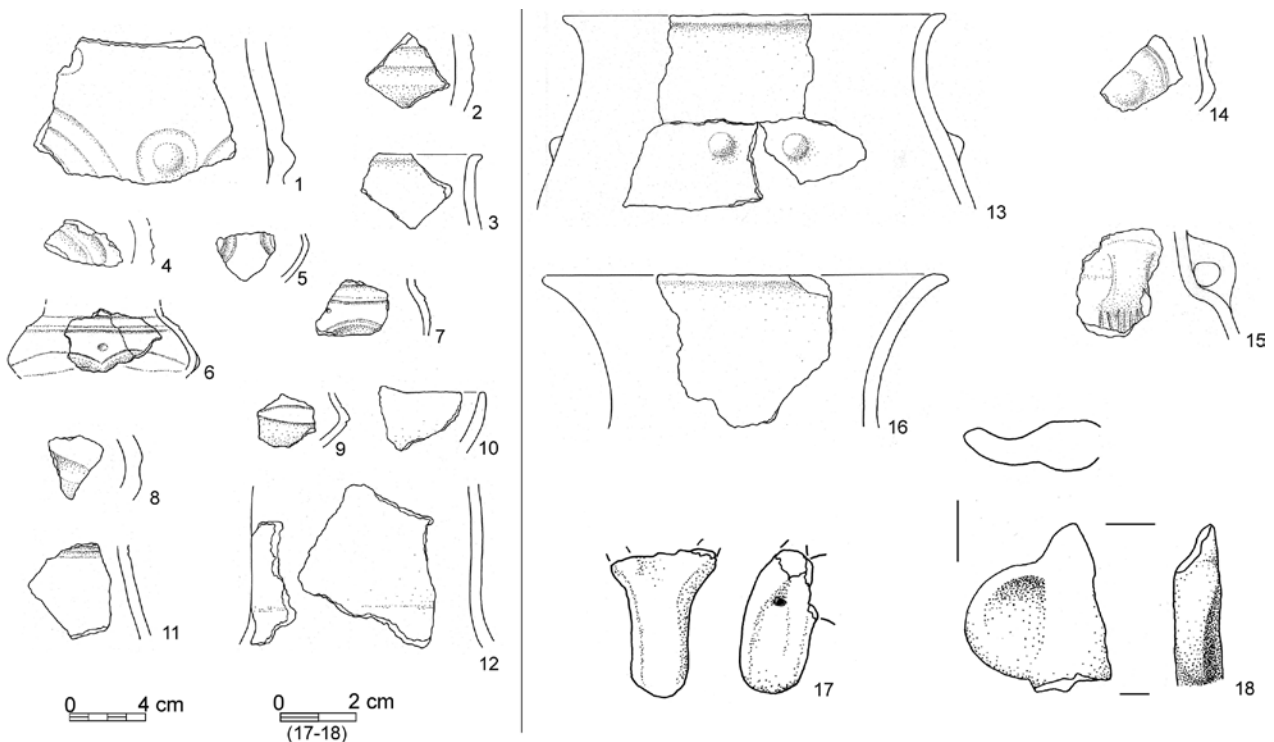
The gate passage cuts through the stone wall and clay embankment. Its bottom slopes up gently reaching the terrace's surface about 8 m from the eastern entrance into the gate passage. Both the space between the stone slabs and the western (inner) approach to the gate were covered by a thin layer of grey-brownish soil, saturated with charcoal, bones and pottery pieces. The same layer was fragmentarily detected also on the slope, beneath the eastern exit from the passage. Among the artefacts retrieved from this layer, some pottery pieces deserve particular attention. They bear spiral and fluted decoration typical of the classic style of the Otomani-Füzesabony culture (18<sup>th</sup>-16<sup>th</sup> century BC) from the northern part of the Great Hungarian Plain (for more details see: Przybyła/Skoneczna 2011). Two soil samples taken from the usable level just at the western entrance to the gate passage yielded a radiocarbon date from the 19<sup>th</sup>-17<sup>th</sup> century BC (MKL-2439, charcoal, 3410 ± 40 BP, 1830-1610 BC 2σ; D-AMS-14045, grain of *Triticum* sp., 3447 ± 32 BP, 1881-1684 BC 2σ). However, the more precise dating of a stratigraphically younger layer covering the bottom level of the passage and belonging to phase Maszkowice II (D-AMS-10625, endocarp of cf. *Prunus spinosa*, 3447 ± 22 BP, 1876-1841, 1782-1689 BC 2σ), allows us to assume that the gate and the whole fortification system must have been built by 1690 BC at the latest, and most probably already existed around the year 1750 BC (fig. 8).





**Fig. 9** Maszkowice (woj. małopolskie/PL). Plan of the structures connected with the second phase of the Early Bronze Age settlement (area excavated in 2010-2015). Within the house areas distribution of animal bones and location of archaeobotanical samples are marked. It is worth to notice that the gate has been established in the place of a distinct set-off of the wall. – (Illustration M. S. Przybyła).

The second phase of building activity (Maszkowice II) brought several important changes. Probably after a fire event, the gate passage was partially filled with charcoal and structural daub, as well as with loess sediment up to the height of about 0.6 m. It is difficult to state whether the gate continued to be used afterwards or not. Next to the western entrance into the passage a dwelling was built: roughly square in plan (c. 6 m × 5 m) and oriented along the West-East axis (fig. 9). Another building, similar in shape and size, was



**Fig. 10** Maszkowice (woj. małopolskie/PL). Selected pottery from the Early and Middle Bronze Age settlement: **1-12** inventory of the older house, in the southern part of the excavated area, and material from the western approach to the gate (phases Maszkowice I-II). – Pottery from the younger house (**13-16. 18**) and from the upper part of the pit fill (**17**) (phase Maszkowice III). – (Drawings M. Skoneczna).

located 2 m further to the north. Between them a huge, 4 m deep storage pit was dug, which was discovered already in 1971-1972 (Cabalska 1974), and partially revealed also during the 2014 excavations. The relics of dwellings from phase Maszkowice II consist mainly of a c. 10-20 cm thick layer of dark brown colour, charred wooden elements (planks) and concentrations of small stones, daub, and ash. Within the bottom part of the layer connected with the southern house a thin, clayey layer was identified, white in colour, which may be considered a relic of a floor cover. The two houses and the fill of the storage pit yielded several thousands of artefacts, mainly pottery fragments but also some antler tools, stone objects, and a small piece of unworked amber. All the decorated shards represent classic Otomani-Füzesabony style from the 18<sup>th</sup>-16<sup>th</sup> century BC (**fig. 10, 1-12**). Samples taken from structures connected with the Maszkowice II phase provided also some radiocarbon dates. From the sediments of the southern house, aside from the date mentioned above, another date was yielded, but of lower precision (MKL-1324, charcoal, 3330 ± 70 BP, 1780-1440 BC 2σ). Radiocarbon dates obtained from the northern house also span a long period (MKL-2539, charcoal, 3510 ± 90 BP, 2045-1621 BC 2σ; D-AMS-14046, grain of *Hordeum vulgare*, 3328 ± 36 BP, 1691-1511 BC 2σ). A much more precise date, however, was obtained from a grain deposit discovered at the bottom of the pit (D-AMS-10627, few grains of *Hordeum vulgare*, 3395 ± 28 BP, 1751-1624 BC 2σ). Combining <sup>14</sup>C dating with stylistic chronology of pottery leads to the conclusion that phase Maszkowice II started probably as early as 1700 BC and lasted no longer as until around the year 1620 BC.

Some detailed analyses revealed interesting facts regarding the functional organisation of the space within the excavated segment of the Bronze Age village. One may observe a distinct concentration of animal bones

within the house remains. Similar functional types of plant macroremains (e. g. chaff + wild species or pure samples of cereal grain) also tend to cluster (fig. 9). Moreover, preliminary results of pottery analysis suggest some regularities in the spatial distribution of certain groups of vessels (e. g. table ware).

The second building phase ended with a serious fire event – both houses were burnt down and the storage pit collapsed, leaving the large funnel-like depression which started to gradually fill up with ash and sediments from the ruined dwellings. Probably more or less at the same time a partial destruction of the wall facade took place. The radiocarbon date obtained for the sample taken from the thin sediment, just under the fallen stone blocks of the outer face points at the 17<sup>th</sup> century BC (D-AMS-14044, grain of cf. *Triticum* sp., 3368 ± 38 BP, 1749-1600 BC 2σ).

This does not mean, however, that the site was abandoned. Probably shortly afterwards two new houses were built within the area encompassed by our excavations (phase Maszkowice III). The southern one is especially well preserved. Its massive, palisade-like eastern wall was established closely to the former gate passage, which by this time had already been completely sealed with clay and large stones. Within the north-eastern corner of the dwelling a stone structure (hearth?) was documented, built of pebbles.

Layers connected with the younger houses and with the ceiling part of the pit's fill yielded large amounts of pottery and animal bones. The former displays the shapes and ornamentation typical of both the post-classic (16<sup>th</sup>-15<sup>th</sup> century BC) and terminal (15<sup>th</sup>-13<sup>th</sup> century BC) Otomani-Füzesabony style (fig. 10, 13-16). An isolated and unusual find originating from the southern house is a small part of an anthropomorphic figurine (fig. 10, 18). The artefact, described in detail elsewhere (Przybyła/Skoneczna 2011, 35-37), represents the so-called violin-shaped idols, particularly characteristic of the Mycenaean culture and northern Balkans in the 15<sup>th</sup>-14<sup>th</sup> centuries BC. It is worth noticing that, despite its exotic form, the statuette was apparently made locally.

Samples for radiocarbon dating were taken from charred wooden elements (MKL-2440, alder plank, 3260 ± 50 BP, 1642-1431 BC 2σ; MKL-2441, outer rings of the oak post, 3240 ± 50 BP, 1625-1421 BC 2σ), as well as from the upper level of the stone structure from the southern dwelling (D-AMS-10628, grain of *Triticum turgidum* ssp. *dicoccon*, 3287 ± 25 BP, 1621-1506 BC 2σ). Taking into account the context of the last of the mentioned samples (uppermost part of the Early Bronze Age package of layers) we preliminarily assume that the Maszkowice III phase lasted no longer than until around 1500 BC. Afterwards, the site was eventually abandoned and remained depopulated for the next 500 years. Around 1000-900 BC another group of people settled in what must have been a ruin of the Early Bronze Age fortress.

## DISCUSSION

Although the presented results are preliminary in their nature, they nevertheless allow for some conclusions to be drawn. Due to the nature of the analysed sources, these conclusions must remain largely intuitive.

1. There is no doubt that the main function of the stone wall was to hold the earth terrace. But at the same time it seems clear that the extent of this construction, and in particular the size of stone blocks constituting the outer face, and its height, exceeds solely constructional purposes. Therefore, I assume that we are dealing here with the fortifications that had a military and possibly also representative function.

The naturally defensive location of the site, the strategic importance of the Łącko Basin as a natural nodal point in the trans-Carpathian communication, as well as some features of local subsistence economy that we are already able to reconstruct, all point out that the inhabitants of the Maszkowice settlement could have had reasons to fear another groups, and that the best strategy of defence was in this case the passive



**Fig. 11** Tentative reconstruction of the earliest phase of the settlement on Zyndram's Hill in Maszkowice (woj. małopolskie/PL) (c. 1750-1700 BC). – (Illustration M. S. Przybyła).

one. We discussed these arguments in more detail elsewhere, just at the beginning of the excavation project in 2010 (Przybyła/Skoneczna/Vitoš 2012; cf. however a different opinion in: Kienlin/Korczyńska/Cappenberg 2014, 188-190).

The direct evidence for violence and war is rare in the archaeological record and always arguable, but it seems worth noting at least two fire events documented within the stratigraphic record and few Early Bronze Age arrowheads, which were found down the slope, immediately beneath the stone wall.

2. The stone construction discovered on the top of Zyndram's Hill should not be regarded as a local invention. Firstly, we already know hundreds of Bronze Age sites from the northern part of the Carpathians, most of them situated in close proximity to the easily accessible sources of stone material, but none of them yielded anything comparable to the Maszkowice fortifications.

Secondly, the stone wall was built at the very start of the Bronze Age occupation, and was designed as an integral part of a complex plan leading to the complete reshaping of the natural landform and converting it into settlement space. One may imagine that this project required an immense workload and had to be well organised, with no space left for experiments. Moreover, the wall was finished despite the fact that the top of the hill, covered by thick loess sediments, was rather inappropriate as stable foundation for heavy stone construction.

Finally, the fortifications discovered in Maszkowice are not a variant of an earth-wood rampart only reinforced by stones, but a stone architecture *per se*. And – however intuitive this observation may be – this architecture makes an impression of a mature one. Stone blocks were preselected, with larger ones used



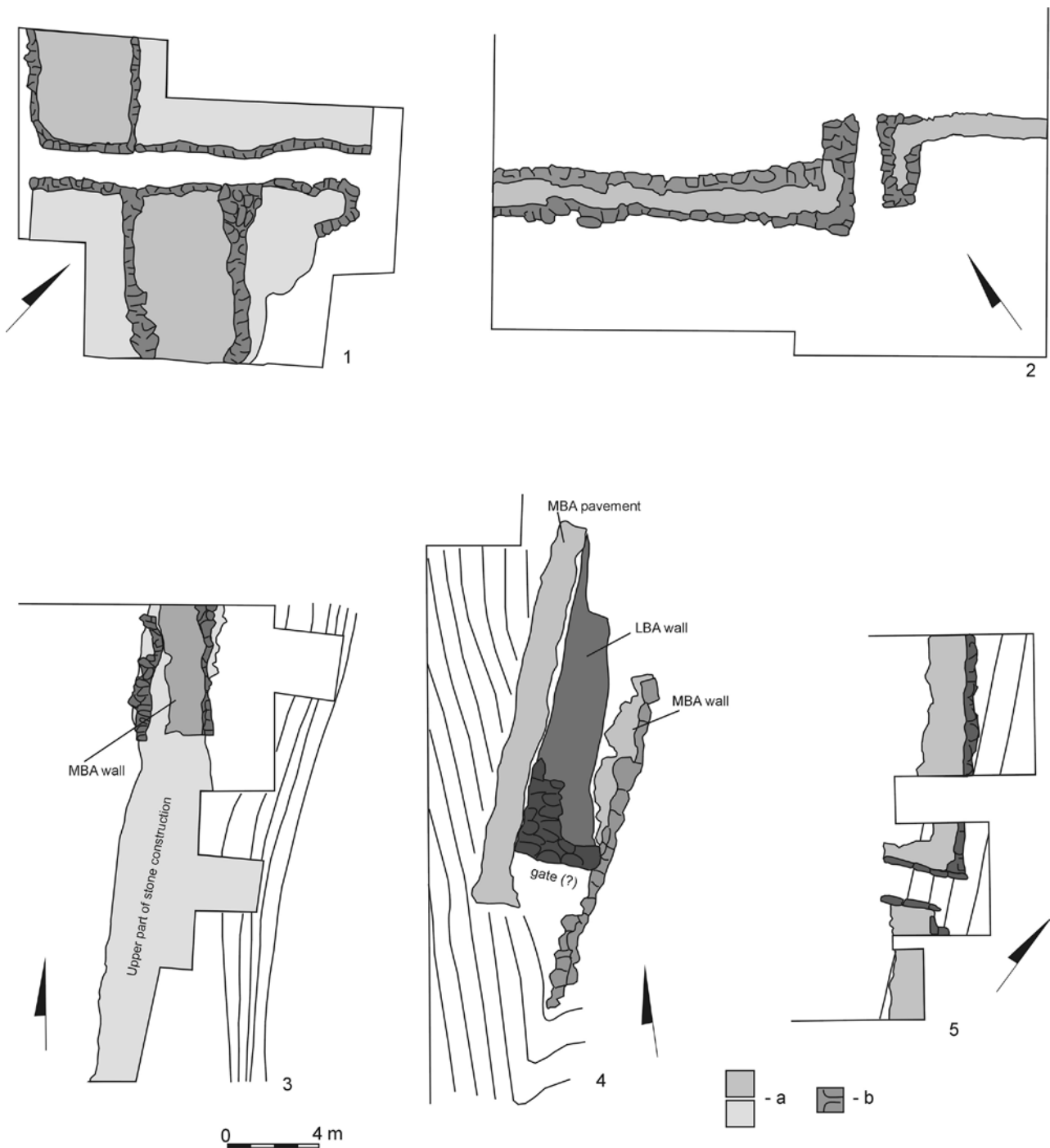
only in the outer facade. Some of them were dressed into regular cuboids, whilst the largest, flat slabs were utilized to flank the gate passage. Finally, few long and thin stones were apparently chosen to tie the face of the wall with the inner part of the construction (**fig. 11**). Summing up – it is very little likely that the final shape of the Maszkowice fortifications was simply the result of trial-and-error method. This in turn means that people who built them around 1750 BC (or at least some of them), must have been familiar with elaborated stone architecture. I think this is enough to introduce a pinch of diffusionistic interpretation.

3. Both in the southern Poland and in the Carpathian Basin stone constructions are very rare if not completely unknown in the Bronze Age. Early and Middle Bronze Age tells of middle Danube and Tisza region – that is the sites belonging to the same pottery tradition as the settlement in Maszkowice – were usually surrounded by a wide ditch, which cannot be unconditionally considered as fortification (e. g. Bader 1982; Kovács 1982).

Few examples of earth-and-stone ramparts are known from the northern and eastern part of the Carpathians, but most of them are poorly preserved, and even less precisely dated. The Early/Middle Bronze Age settlement in Spišský Štvrtok (okr. Levoča) in central Slovakia, with its impressive rampart made of countless thin stone slabs and a wide gate flanked by two bastions might be regarded as an exception (Vladár 1973, 280-286). Unfortunately, it shares the fate of many other »legendary sites«: being widely discussed, but never properly described and published, the settlement remains in fact largely unknown. Moreover, the completely unusual form of fortifications from Spišský Štvrtok finds no counterparts in Central Europe nor in the Bronze Age Mediterranean, as has recently been shown in a comparative study by Mateusz Jaeger (2014). This, in turn, provides additional support for the opinion (unofficially circulating for a long time) that the stone wall of Spišský Štvrtok should be dated no earlier than the Pre-Roman Iron Age (cf. Mozsolics 1988, 43-44).

There are two regions however, from where constructions similar to those discovered on Zyndram's Hill are known (**fig. 12**). A few hillforts from the territory of present-day Switzerland and the adjacent part of Italy, especially Crestaulta nearby Lugnez (Kt. Graubünden/CH), Flums-Gräpplang (Kt. St. Gallen/CH), and Vinschgau-Ganglegg (South Tyrol/I) (Burkart 1946; Steiner 2007; Lanzrein 2009), share the same combination of construction terrace and retaining stone wall, and date to a similar period (18<sup>th</sup>-16<sup>th</sup> century BC) as the site in Maszkowice. However, better parallels for the stone fortifications themselves can be found in defensive settlements from Bosnia-Herzegovina and Caput Adriae region. Most of them had not been established before the Late Bronze and Early Iron Age, but some existed already in the Early Bronze Age (e. g. Čović 1989, 108-109). The best example is a huge site in Monkodonja near Rovinj (Istarska županija/HR), sometimes regarded as a settlement centre of proto-urban character (Hänsel/Mihovilić/Teržan 2015). The wall discovered there, which survived extraordinarily well, consists of the outer face built of large, roughly hexagonal blocks, and the inner part made of smaller stones. Three elaborated gates have narrow passages, which also reminds the construction revealed on Zyndram's Hill. Finally, the set of the three oldest radiocarbon dates (3415 ± 33 BP, 3385 ± 29 BP, 3430 ± 27 BP – Hänsel et al. 2015) is identical with those obtained for phases Maszkowice I and II, pointing at the second half of the 18<sup>th</sup> century BC.

4. When discussing the rare examples of early stone architecture in Central Europe it is not possible to avoid the question to what extent should we connected them with Mediterranean influences. Monumental Early/Middle Bronze Age stone constructions are known from Apulia (especially Roca close to Melendugno, [prov. Lecce]: e. g. Scarano 2011). However, undoubtedly the earliest evidence of defensive stone architecture in Europe comes from the islands of the Aegean Sea and the Greek mainland, where elaborated fortifications were built already in the first half of the 3<sup>rd</sup> millennium BC (e. g. Hägg/Konsola 1986). These first examples, far preceding the heyday of the Late Bronze Age Mycenaean stone architecture, display certain features that can also be found in sites like Monkodonja or Maszkowice, namely narrow gate passages and



**Fig. 12** Generalized plans of the earliest stone fortifications outside the Aegean, selected examples: **1** Roca in Apulia (prov. Lecce/I), different phases of the Middle Bronze Age stone wall, one of the trenches in the south-eastern part of fortifications. – **2** Monkodonja, near Rovinj (Istarska županija/HR), oldest phase of the acropolis wall from the 18<sup>th</sup> century BC, trench X. – **3** Crestaulta nearby Lugnez (Kt. Graubünden/CH), different phases of the Middle Bronze Age retaining wall. – **4** Vinschgau-Ganglegg (South Tyrol/I), different phases of the Middle and Late Bronze Age (Urnfield period) stone fortifications. – **5** Zyndram's Hill in Maszkowice (woj. małopolskie/PL), oldest phase (18<sup>th</sup> century BC) of the settlement. – **a** smaller stones, random rubble masonry; **b** larger, more regular stone blocks, sometimes quasi-ashlar masonry. – (1 after Scarano 2011, fig. 1; 2 after Hänsel/Mihovilić/Teržan 2015, appendix 6; 3 after Burkart 1946, pl. 4; 4 after Steiner 2007, fig. 8; 5 illustration M. S. Przybyła).

complex constructions of walls, with distinct outer facade and less elaborated inner part. Does it mean, however, that the instruction how to build the Central European stone fortifications was borrowed from the Mediterranean?

There is general consensus among the Bronze Age specialists that during the first half of the 2<sup>nd</sup> millennium BC some routes of raw material and exotic goods transmission existed, which connected the Eastern Mediterranean with far ends of Europe such as the British Islands or Scandinavia. It is also widely accepted that both the Adriatic coast and the northern part of the Carpathians (at least from around 1800 BC) played an important role, being nodal points of these routes (e.g. Sherratt 1993; Kristiansen/Larsson 2005; Harding 2013 with further references). What, however, is a matter of debate, is how important these long-distance contacts were in forming the everyday life of Bronze Age communities? Did the latter exist as integral part of a »global« economic system and depend somehow on the political and cultural centres of the Mediterranean, as the advocates of the world-system theory proposed? Or maybe everything that mattered for Bronze Age people was limited to the small world of their villages and village networks? I believe that these two views do not need to be seen as mutually exclusive. Ancient societies existed within different, overlapping networks. They were parts of local subsistence systems, as well as of regional networks of marital exchange and political coalitions. Probably these small networks were responsible for spreading cultural traits connected with everyday life, such as pottery style. However, individual members of local communities might have been involved in kinship or friendship relations which reached far beyond the small world of the local networks. And these distant connections could also have mattered for local society as a whole and might have left their traces in material evidence.

A good and inspiring example in this context may be the observation made by Ulrich Thaler (2007), concerning connections between the Mycenaean and Hittite architecture in the 13<sup>th</sup> century BC. Obviously enough, the example can be explored to some degree only, since it refers to the contacts between centralized states marked by stable social hierarchies, undoubtedly different from village communities of Central European Bronze Age. What is the main point here, however, is how various levels of relation can be reflected in material culture. There are virtually no traces of everyday contact between the two cultures (in particular, imports of pottery are very rare), but written sources inform us about direct personal relations between Ahhiyawan and Hittite elites and the expression of these contacts we can trace in monumental architecture, starting from purely technical aspects (masonry technique, tools used) and ending with the pattern of settlement space organisation.

But how could distant individual contacts become important for simple village communities of Central Europe? We may assume that in the prehistoric world geographical space was to a certain degree identical with the space of social relations. People were not traveling north or south or through a highway network, but from one friendly house to another. And having a net of friendly houses somewhere far away and hosting travelers from distant lands decided of being in or out of global network. This might be crucial for the position of individuals and communities within their small worlds and, in consequence, something widely desired.

It is not the early Mediterranean states that created the European network of long-distance connections, but the network developed itself, as every society that once joined it had a business in looking for new contacts and opportunities for being and staying an »important node«. I think this might be the reason why a community like this of Zyndram's Hill decided to settle at the interchange of natural communication roads, despite the fact that at this time the place they chose was a wilderness lost in the middle of the mountains and everything but economically attractive. I also suppose that the imitation of »southern« patterns and architecture we discovered in Maszkowice, might be part of the concept how to present oneself as important element of the global network.

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## *Zusammenfassung / Summary / Résumé*

### **Die Entdeckung frühbronzezeitlicher Steinarchitektur in den polnischen Karpaten**

Die europäische Archäologie neigt in den letzten Jahrzehnten dazu, sich auf das Thema der Fernkontakte – dem Austausch von Sachen und Ideen – und deren Einflüsse auf die lokale Bevölkerung und ihre Entwicklung zu konzentrieren. Ein oft in diesem Zusammenhang diskutierter Aspekt ist die Übernahme kultureller Muster aus dem Mittelmeergebiet durch Gemeinschaften in Mitteleuropa in der Frühbronzezeit. Archäologische Fundstellen, die sich von dem lokalen kulturellen Hintergrund abheben, verdienen eine besondere Aufmerksamkeit bei dieser Fragestellung. Die befestigte Höhensiedlung von Maszkowice (westliche Karpaten) ist ein Beispiel für solch einen Fundort. Hier fanden bereits in der Mitte des 20. Jahrhunderts archäologische Ausgrabungen statt. Eine Wiederaufnahme der Arbeiten nach 2010 führte zu einer Verankerung der Datierung in den Zeitraum von 1750-1500 v. Chr. und zum Nachweis von Verbindungen der ersten Besiedler mit dem östlichen Karpatenbecken. Ein besonders spektakuläres Ergebnis der Arbeiten wurde 2015 erzielt, als die Überreste einer massiven Steinbefestigung aus der Zeit um 1750 v. Chr. entdeckt wurden. Es ist eines der wenigen sehr frühen Beispiele für eine fortgeschrittene Steinarchitektur in Europa, das Mittelmeergebiet ausgenommen, und gleichzeitig die älteste derartige Konstruktion nördlich der Karpaten. Die Mauerkonstruktion ist über 2 m dick und besteht aus einer Füllung aus kleinen Steinen und einer massiven Außenseite. Bei den Ausgrabungen in 2015 wurde auch der östliche Eingang in die befestigte Fläche aufgedeckt – eine mit großen Sandsteinblöcken flankierte Rampe durchquert den Steinwall und die randliche lehmige Terrasse. Bezüglich der Bautechnik und der architektonischen Lösungen findet die Anlage von Maszkowice ihre nächsten zeitgleichen Parallelen an Fundorten in den Alpen und im Caput Adriae.

### **Early Bronze Age Stone Architecture Discovered in the Polish Carpathians**

European archaeology of the last decades tends to focus on the subject of distant contacts – the exchange of goods and ideas – and the influence they have on local populations and their development. One of the problems particularly often discussed in this context is the reception of cultural patterns of the Mediterranean by societies of the Central European Early Bronze Age. Archaeological sites outstanding from local cultural background deserve special attention when studying this issue. The example of such a location is the hillfort in Maszkowice (Western Carpathians). The site was subject to archaeological excavations already in the middle of the 20<sup>th</sup> century. Studies carried out there again from 2010 resulted in setting the chronology of the oldest settlement remains for 1750-1500 BC, as well as proving the relations of its first inhabitants with the eastern part of the Carpathian Basin. An absolutely spectacular result of these works was achieved in 2015, when relics of massive stone fortifications dating from around 1750 BC, were discovered. It is one of the few oldest examples of advanced stone architecture in Europe, excluding the Mediterranean, and at the same time the oldest construction of this kind in the areas north to the Carpathians. The wall is about 2 m wide and consists of an inner part built of smaller stones, and the massive outer face. During the excavations in 2015 the eastern entrance into the fortified area was revealed, too – a ramp cutting across the stone wall and adjacent clay terrace and flanked by large sandstone slabs. As regards the type of masonry and architectural solutions, the construction discovered from Maszkowice finds the closest, contemporary analogies in some sites from the Alps and the Caput Adriae region.

### **Découverte d'une architecture de pierre datant de l'âge du Bronze ancien dans les Carpates polonaises**

L'archéologie européenne de ces dernières décennies a tendu à se focaliser sur des thématiques de contacts à longue distance – les échanges de biens et d'idées – et leur influence sur les populations locales et leur développement. Un des

problèmes discutés particulièrement souvent dans ce contexte est la réception de modèles culturels méditerranéens par les sociétés du centre de l'Europe à l'âge du Bronze. Ce qui mérite l'attention pour qui étudie ce genre de phénomènes sont les sites qui diffèrent du reste de la culture locale. L'un des ces exemples est le site perché fortifié de Maszkowice (Carpatés occidentales). Le site a déjà fait l'objet de fouilles au milieu du 20<sup>e</sup> siècle. Les études menées depuis 2010 ont permis d'affiner la chronologie des premiers restes d'habitats pour la période 1750-1500 av. J.-C. et ont aussi prouvé des relations entre les premiers habitants du site et la partie orientale du bassin des Carpates. Ces campagnes ont livré des résultats spectaculaires en 2015 lors de la mise au jour de fortifications massives datant de 1750 av. J.-C. C'est l'un des exemples les plus anciens d'architecture de pierre en Europe en dehors des zones méditerranéennes et également la construction de ce type la plus ancienne au Nord des Carpates. Le mur fait environ 2 m d'épaisseur et est composé d'un parement interne de petit appareil alors que le parement externe est massif. Lors des fouilles de 2015 l'entrée orientale du site a été révélée, une rampe coupe le mur de pierre et une terrasse d'argile flanquée de dalles de grès permet l'entrée. Au regard du type de la maçonnerie et des solutions architecturales mises en œuvre, les découvertes de Maszkowice trouvent leur parallèle le plus proche dans certains sites Alpains et de la région du Caput Adriae.

Traduction: L. Bernard

### *Schlüsselwörter / Keywords / Mots clés*

Polen / Bronzezeit / Otomani-Füzesabony-Kultur / Befestigung / Steinmauer / Tor

Poland / Bronze Age / Otomani-Füzesabony culture / fortification / stone wall / gate

Pologne / âge du Bronze / culture Otomani-Füzesabony / fortification / mur de pierres / porte

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