

**BBV**

Band 21



**Museum für Vor- und  
Frühgeschichte**  
Staatliche Museen zu Berlin

Berliner Beiträge  
zur Vor- und Frühgeschichte  
Band 21

herausgegeben von  
Matthias Wemhoff  
2017



# **Fortifications: The Rise And Fall Of Defended Sites In Late Bronze And Early Iron Age Of South-East Europe**

International Conference in Timișoara,  
Romania from November 11<sup>th</sup> to 13<sup>th</sup>, 2015

Edited by  
Bernhard S. Heeb,  
Alexandru Szentmiklosi,  
Rüdiger Krause and  
Matthias Wemhoff

Staatliche Museen zu Berlin  
Berlin 2017

**Titelbild:**

**Aerial view of the late Bronze Age ramparts of Cornești-Iacauri**

Foto: Daniel Baltat

**Impressum**

Die Deutsche Bibliothek – CIP-Einheitsaufnahme

Staatliche Museen zu Berlin – Preußischer Kulturbesitz  
Berlin 2017

Berliner Beiträge zur Vor- und Frühgeschichte, Bd. 21  
NE: Fortifications of South-East Europe

© Staatliche Museen zu Berlin – Preußischer Kulturbesitz  
2017

Übersetzung: Martin Baumeister

Redaktion: Heino Neumayer, Bernhard Heeb

Satz: typesatz Hans Spörri, Susanne Bonnet, Dieter Wendland

Umschlaggestaltung: Alexander Polkehn

Druck: druckhaus köthen GmbH & Co. KG, Köthen

ISBN

# Inhalt

- 7 **Preface**
- 9 **Cornești-Iarcuri and the rise of mega-forts in Bronze Age Europe**  
Anthony Harding
- 15 **The rise of a chieftain. The initial phase of the Hünenburg hillfort near Watenstedt in Lower Saxony (Germany).**  
Immo Heske
- 33 **The brief ascendancy of the Bronze Age fortification on Bernstorf Hill in Upper Bavaria**  
Vanessa Bähr
- 59 **Defended sites and fortifications in Southern Germany during the Bronze Age and Urnfield Period – a short introduction**  
Markus Schußmann
- 79 **The Vráble toolbox: A multidisciplinary investigation of settlement change**  
Knut Rassmann, Samantha Reiter, Jozef Bátor and Nils Müller-Scheeßel
- 91 **Recycled fortifications: The Late Bronze and Iron Age settlement in Maszkowice (Western Carpathians)**  
Marcin S. Przybyła and Joanna Jędrzyk
- 107 **Hoards and fortifications: new observations on the structure and function of Eastern Hungarian Late Bronze Age and Early Iron Age high-altitude fortified settlements**  
Gábor V. Szabó
- 135 **Recent work on Late Bronze Age fortified settlements in south-east Hungary**  
Vajk Szeverényi, Péter Czukor, Anna Priskin and Csaba Szalontai
- 149 **The Morava Valley in the Late Bronze and Early Iron Age – changes in topography and material culture**  
Aleksandar Bulatović and Vojislav Filipović

- 161 The Late Bronze Age fortification of Gradište Idjoš in its regional context**  
Barry Molloy, Dragan Jovanović, Neda Mirković-Marić, Miroslav Marić, Patrick Mertl and Lidija Milašinović
- 173 The settlement of Călinești Oaş. Data regarding the construction and the origin of fortifications in the Gáva culture**  
Liviu Marta
- 189 Bronze and Iron Age fortifications in north-western Romania. A case study: The Şimleu Depression (Sălaj County)**  
Ioan Bejinariu
- 205 Teleac: defence and trade in a Late Bronze Age and Early Iron Age hillfort in Transylvania**  
Claes Uhnér
- 217 Corneşti-Iarcuri – 10 years of research (2007–2016). Some important preliminary results.**  
Bernhard S. Heeb, Alexandru Szentmiklosi, Andrei Bălărie, Ralf Lehmpuhl and Rüdiger Krause

# Recycled fortifications: The Late Bronze and Iron Age settlement in Maszkowice (Western Carpathians)

Marcin S. Przybyła and Joanna Jędrzyk

## Introduction

In the 1<sup>st</sup> century AD the Greek poet Alpheus Mytilenaeus visited one of the famous places associated with the heroic period described by Homer. He recorded his impressions for posterity in the following epigram:

*The cities of the hero age thine eyes may seek in vain,  
save where some wrecks of ruin still break the level plain.  
So once I saw Mycenae, the ill-starred, a barren height  
too bleak for goats to pasture – the goat-herds point the site.*

*And as I passed a greybeard said, »Here used to stand of  
old a city built by giants, and passing rich in gold«*

(translated by R. Rodd, after Stoneman 1994: 93).

It is a rare opportunity indeed when literature gives us a direct insight into how the ancients perceived the relicts of even older prehistoric periods, and one which is particularly stimulating when we ponder on the phenomenon of the re-occupation of long-deserted settlements. Folk tales or a mysterious aura might have caused such places to be perceived as either extraordinarily attractive or particularly sinister – but by no means neutral. In many cases, the visible remains of ancient times would also have marked their new owners as the heirs of a certain tradition.

The perception of the past in prehistoric societies has been the subject of archaeological debate for some time, not only with regard to the Mediterranean region, but also other parts of Europe.<sup>1</sup> However, except for sepulchral architecture (kurgans, megaliths) and the most elaborate examples of settlement earthworks, it is disputable whether and to what extent ancient communities were capable of identifying correctly (that is to say as the heritage of past generations) the less monumental and less permanent traces of human occupation. In this paper, we are going to characterise an archaeological site which provides an instructive example of the prehistoric re-occupation of older settlement remains. Excavations carried out on the hill-

fort at Maszkowice (Western Carpathians) in 1959–1975 and subsequently in 2010–2015 revealed a succession of two fortified settlements – the older one originating from the transition from the Early to the Middle Bronze Age (henceforth: EBA/MBA), and the younger one dated to the Late Bronze and Early Iron Age (henceforth: LBA/EIA). The two settlements were separated by a time gap of at least five hundred years. Of particular importance were the results of the 2015 campaign, when we came across the remains of elaborate stone fortifications. Although they had been erected around 1750 BC, at the very beginning of the EBA/MBA occupation of the site, they were obviously still visible and suited for a secondary utilisation eight centuries later when the younger (LBA/EIA) settlement was established.

The issues discussed in the paper are as follows. Firstly, we are going to identify to what extent the presence of the remains of the older settlement might have influenced the location of the younger one. Secondly, we will consider how the visible relicts of the EBA/MBA fortifications were later adapted and how (if at all) they determined the layout of the LBA village. Thirdly, we will try to determine whether the shared topographical position and location in an ecological zone resulted in identical patterns of spatial organisation in both settlements, and take a look at their function as nodes of settlement and communication networks as well as the economic strategies employed by their inhabitants.

## A short history of the site's occupation

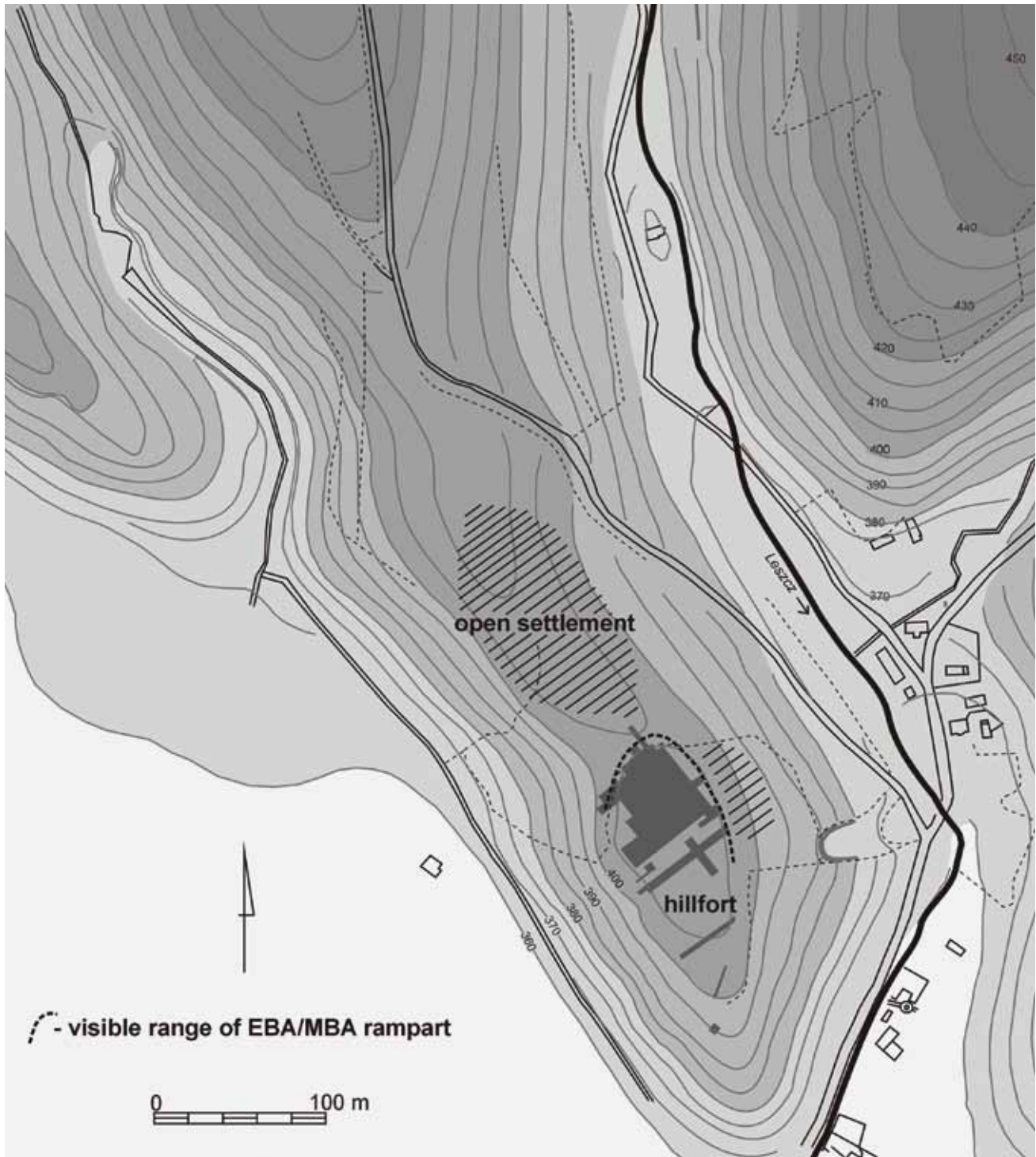
The archaeological site at Maszkowice was described for the first time at the very beginning of the 20<sup>th</sup> century.<sup>2</sup> However, the place had been known in the local community as a »stronghold« (*grodzisko*) at least as early as the 16<sup>th</sup> century AD. In the 1960's and 70's, the site was investigated by Maria Cabalska of the Jagiel-

<sup>1</sup> BRADLEY 2002.

<sup>2</sup> DEMETRYKIEWICZ 1907.

lonian University in Kraków.<sup>3</sup> In spite of some methodological flaws, these early excavations produced a large assortment of finds. Preliminary analysis of the collected material showed clearly that the site had huge potential and needed to be revisited.<sup>4</sup> As a consequence, a new on-site archaeological project was launched in 2009.

The Maszkowice site is located at the northern edge of a small (approx. seven kilometres long) widening of the upper Dunajec valley called the Łącko Basin. The valley bottom consists of fertile alluvial soils which must have made the area attractive for prehistoric subsistence farming.<sup>5</sup> The location of the site is clearly defensive in nature. The flat top of Zyndram Hill rises



**Fig. 1** Location of the site. The site comprises a fortified part and a vast open part which was inhabited from LBA-EIA (drawing by M. S. Przybyła).



approximately 50 m above the valley bottom (Fig. 1). Its western and southern slopes are as steep as 45 degrees in places, with a relatively gentle approach to the top only from the north and north-east, where the plateau was protected by man-made fortifications. The interior space of the settlement at the top of Zyndram Hill is very limited, and does not exceed 5000 m<sup>2</sup>.

The site has a long history of occupation. The early excavations, which focused on the central and northern part of the plateau, led mainly to the discovery of remains of the younger settlement phase.<sup>6</sup> These comprised more than one hundred pits, clustered in the central part of the settlement, as well as a black culture layer, from 50 to 80 cm thick, which extended along the northern and eastern edge of the plateau. At first glance, the »upper« layer of the site seems to be more or less homogenous, but clues such as the stratigraphic order of artefacts, different depths of postholes and regularities in their arrangement, as well as the presence of stone pavements, allowed us to distinguish five stages of building activity within the younger phase of occupation.<sup>7</sup>

The youngest artefacts, retrieved from the infill of several pits and from the surface of the layer immediately beneath the topsoil, are from the Pre-Roman Iron Age (c. 200–50 BC, Phase Maszkowice VIII). Within the culture layer, they are mainly scattered on top of or around the pavements made of round stones, which already belong to the previous phase of occupation (Phase Maszkowice VII) which is dated to the EIA (Hallstatt D, c. 600–400 BC). Two further strata (Phases Maszkowice V and VI) were identified below the level of the pavements, in the middle part of the upper culture layer. These were associated with structures made of large blocks of sandstone, probably the foundations of houses. With regard to the technological and stylistic features of their pottery, both phases seem to be quite homogenous, and may be ascribed to the transition from the Bronze to the Iron Age (c. 800–600 BC). Finally, the lowest stratum of the upper black layer (Phase Maszkowice IV), which is partially covered by thin lenses of clay, contains material from the second half of the LBA (Hallstatt B, c. 900–800 BC).

Whilst Cabalska's fieldwork had focused on the central zone of the site, the new trenches were situated close to the eastern edge of the plateau. Here, beneath the

layer associated with the younger occupational phase, at a depth of about 50–100 cm, we came across a complicated stratigraphic sequence which turned out to be the remains of an EBA/MBA settlement.<sup>8</sup>

It consists of features which can be assigned to three phases of construction. The first of these (Maszkowice I) is defined as the time when massive stone fortifications were erected.<sup>9</sup> A surface layer discovered in 2015 next to the inner entrance to the gateway corridor is also associated with this phase. Phase Maszkowice II is represented by a single huge storage pit and a row of houses – all of them bearing distinct traces of fire. Finally, the relics of a few younger houses which were erected after the fire event constitute the remains of Phase Maszkowice III. Based on the stylistic chronology of pottery (all decorated pieces belong to the classic and post-classic phases of the Otomani-Füzesabony culture) and a long series of radiocarbon dates, we assume that the beginning of the EBA/MBA settlement fell around 1750 BC (certainly before 1700 BC), whilst its abandonment occurred before 1500 BC, and most probably as early as 1600 BC.<sup>10</sup> The bottom of the stratigraphic sequence is constituted by a layer of topsoil, preserved by being buried beneath the clay terrace and stone fortifications. In some of our trenches, it lies as deep as 2.5 m below the modern level of the plateau.

### The LBA/EIA settlement and its layout

Unlike the EBA/MBA settlement, which according to the present state of research seems to have been restricted to the small fortified area, the remains of the LBA/EIA village extend far beyond the summit of the hill, covering its eastern slope and the northern, lower part of the spur as well. Taking into account the results of the geophysical survey and test excavations (two small trenches) in 2011 and 2015, it might be assumed that this »open« sector of the LBA/EIA settlement consisted of a sparse scattering of farmsteads. However, it is worth stressing that this area has not yet been examined in detail.

At first glance, the body of information available with regard to the hilltop part of the settlement, which was to a large extent the subject of the 1959–1975 excavations, seems much larger. However, the scientific po-

<sup>3</sup> CABALSKA 1977.

<sup>4</sup> MADYDA-LEGUTKO 1996, 19–23; PRZYBYŁA 2009, 230–249.

<sup>5</sup> PRZYBYŁA ET AL. 2012.

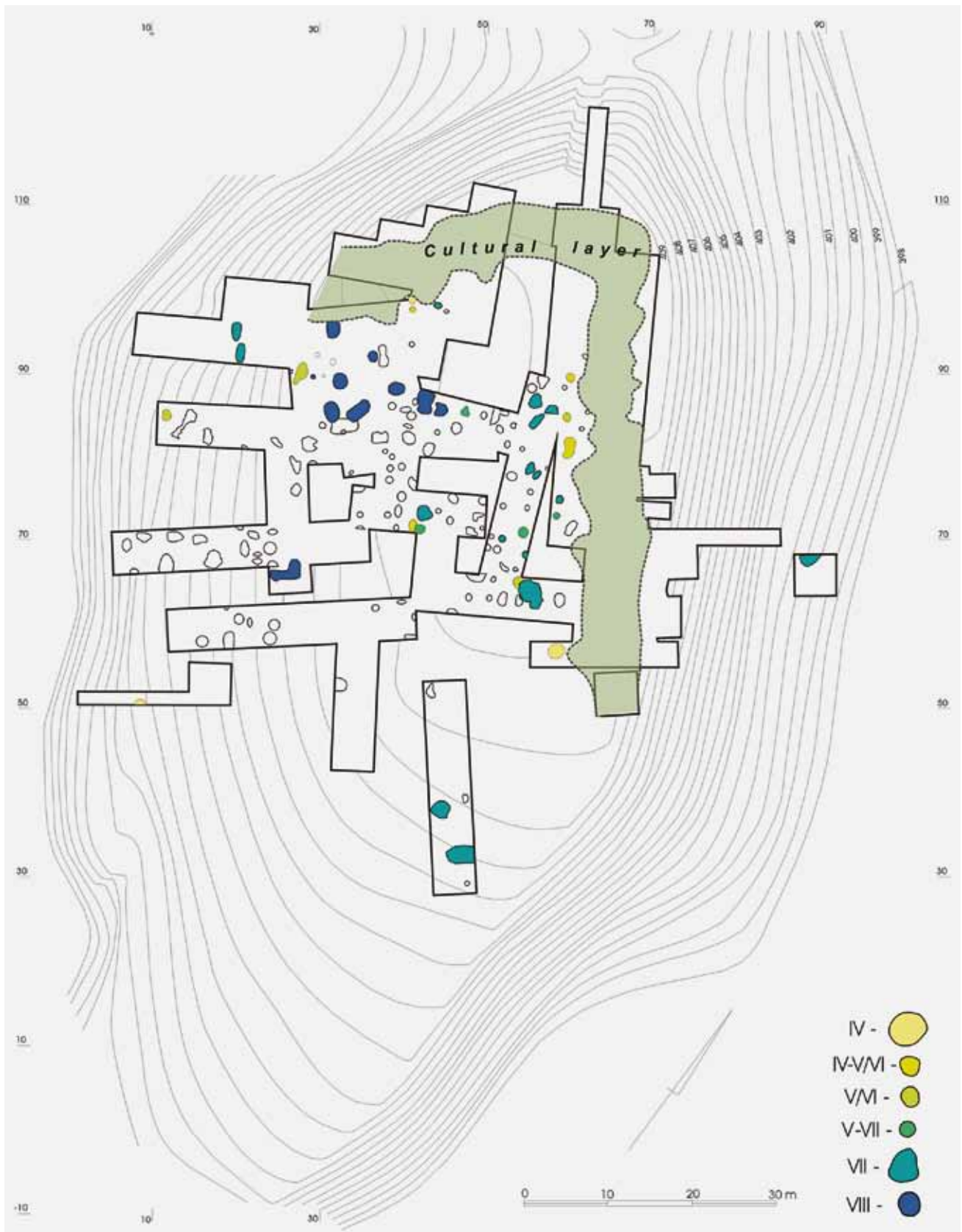
<sup>6</sup> CABALSKA 1977.

<sup>7</sup> PRZYBYŁA AND SKONECZNA 2014.

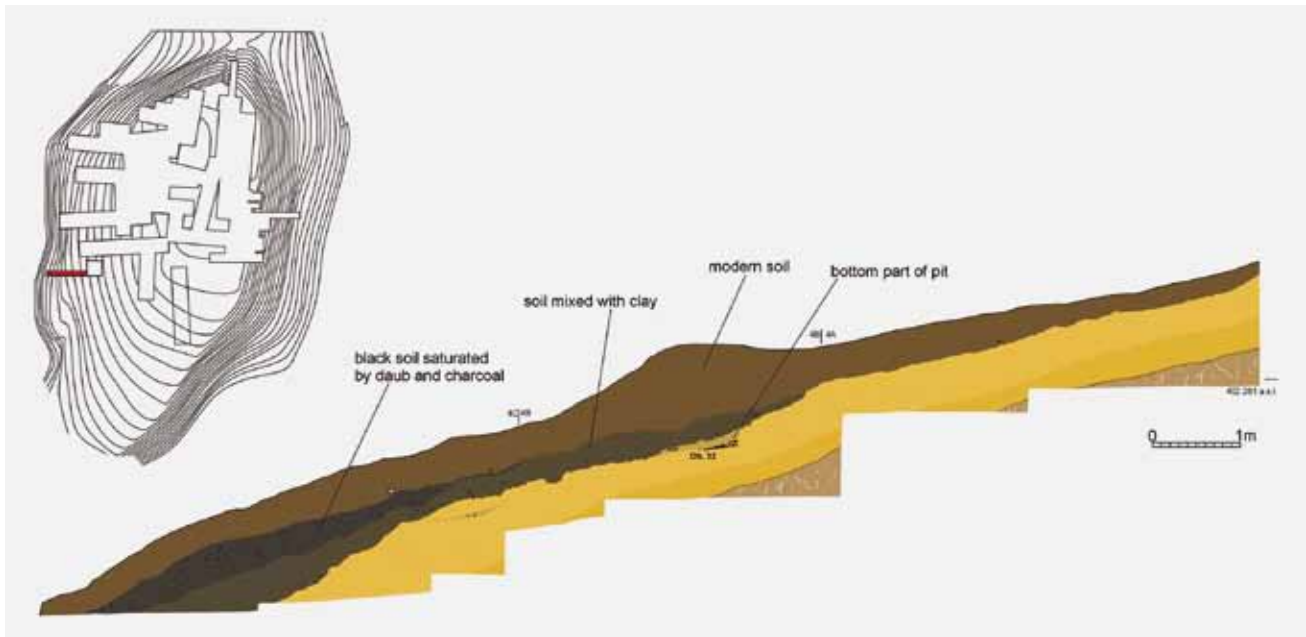
<sup>8</sup> PRZYBYŁA AND SKONECZNA 2011; PRZYBYŁA 2016.

<sup>9</sup> PRZYBYŁA 2016.

<sup>10</sup> PRZYBYŁA 2016.



**Fig. 2** Plan of the site in the younger occupation phase; the area where a thick cultural layer was recorded marks the zone where the above-ground buildings were concentrated. Colours are used to indicate pits from subsequent building phases (IV: c. 900–800 BC; V–VI: c. 800–600 BC; VII: c. 600–400 BC; VIII: c. 200–50 BC) (drawing by J. Jędrzyk).



**Fig. 3** Profile of the 2011 trench situated near the western edge of the plateau. The effects of large-scale erosion can be seen in the form of thick layers of run-off soil and the remaining bottom part of a half-eroded trapeze-shaped pit (drawing by M. J. Przybyła).

tential of the data collected during Maria Cabalska's fieldwork is limited due to the incomplete state of the field documentation and the methodology applied. A large number of finds cannot be attributed more precisely than to particular trenches, while in analysing others one faces countless contradictions between the information provided by field diaries, drawings and the descriptions on the boxes containing the material. In this paper, we present the results of our examination of all data concerning the features associated with the LBA/EIA settlement. We were able to compile a complete set of information (on localization, shape, size and chronology) for 39 out of the more than 100 pits of all kinds which were examined during the »old« excavations. Thanks to the results of our own excavations, we are also able to make some general statements about the layout of households and the construction of the LBA/EIA buildings.

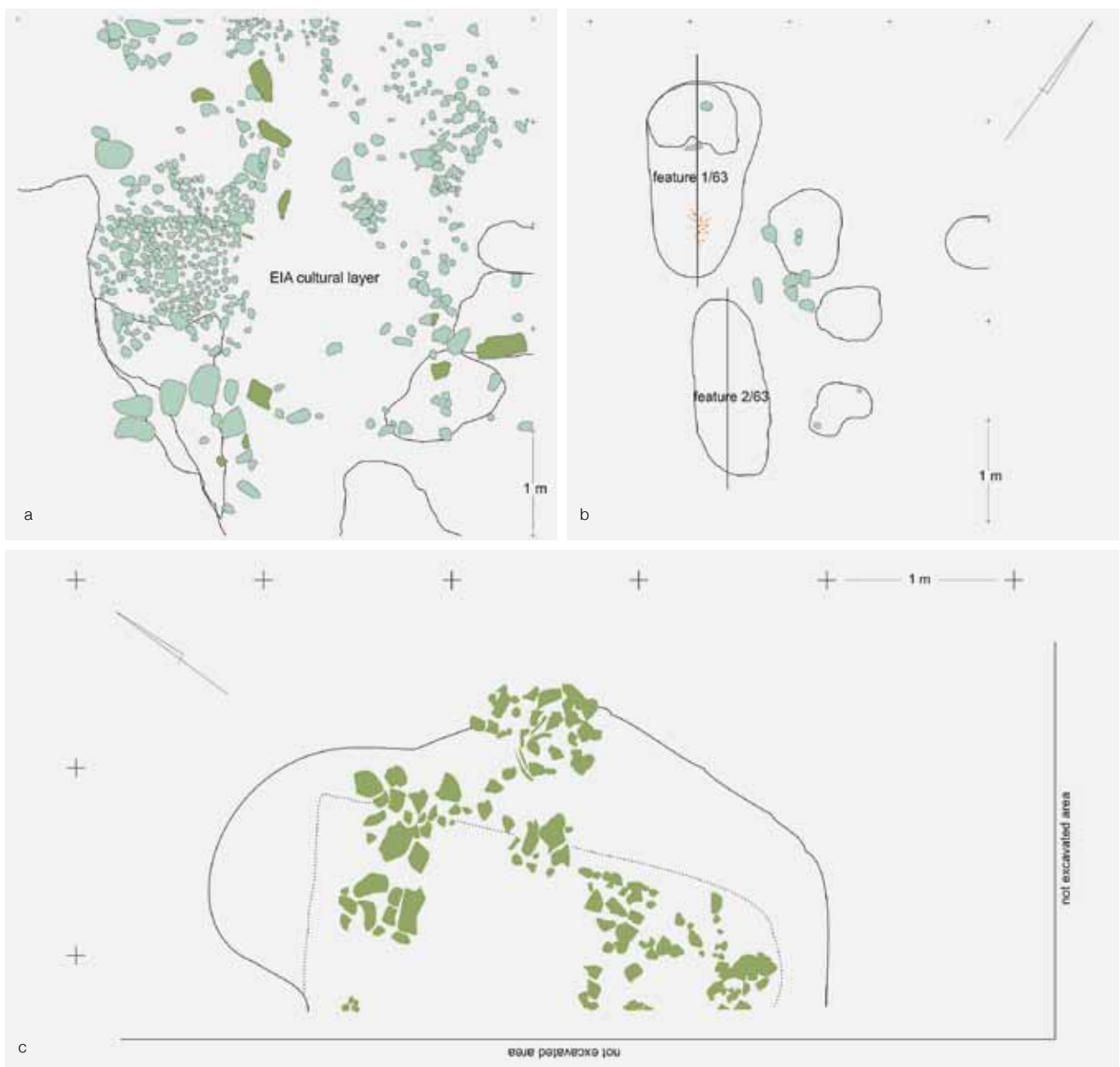
As we have already mentioned above, the hilltop settlement can be divided into two parts. Along the edges of the eastern and northern terraces, in the highest part of plateau, lies the zone of the deep culture layer, which is approximately 10 m wide (Fig. 2). Within and below this layer, one comes across a large number of postholes, as well as regular stone pavements, reflecting the concentration of dwellings on the outer perimeter of the settlement. However, it still remains an open question to what extent the original zone of intensive occupation (the area where the culture layer accumulated) was reshaped by post-depositional processes. It

seems that at the eastern edge of the plateau denudation was small-scale and occurred only in a few segments of the terrace. We recorded a thin layer of black soil saturated with LBA-EIA pottery both beneath the surface of the eastern terrace and on the slope below. In some places we also observed concentrations of small rocks, probably originating from eroded EIA pavements.

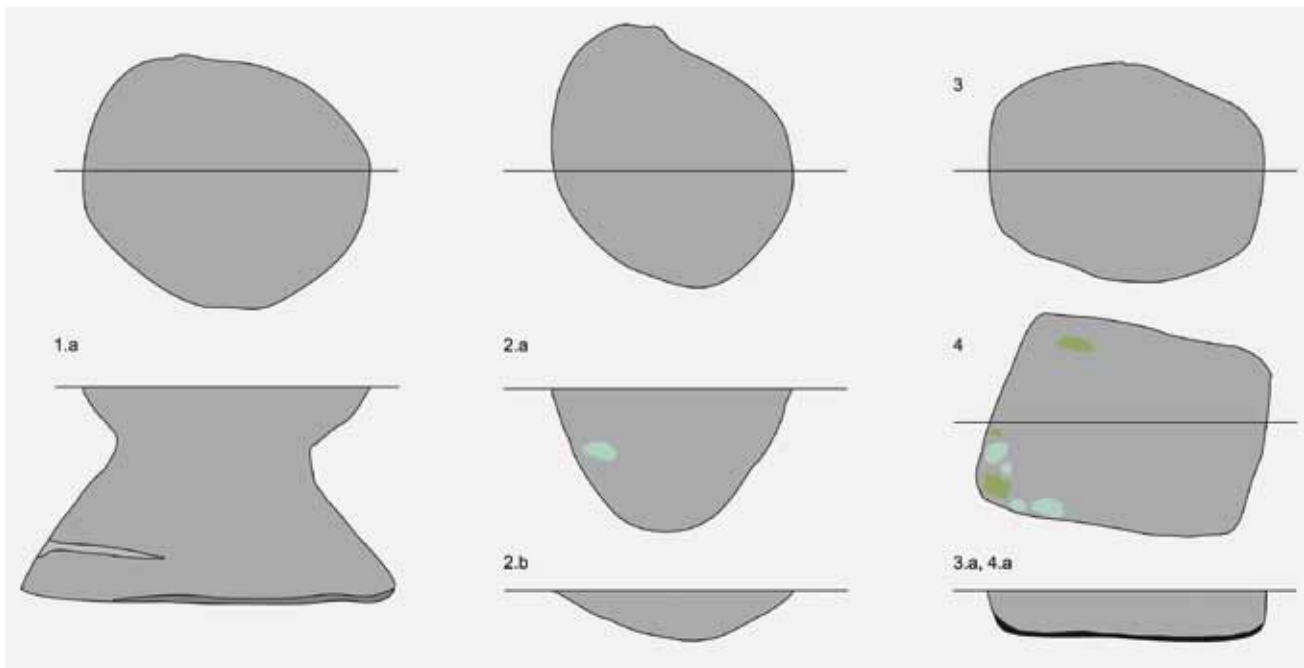
The run-off of the finer fraction of soil apparently continued throughout the whole younger phase of the settlement. The depth of the LBA/EIA cultural layer varies significantly and depends on the relief of the terrain, or more precisely, on how the surface of the EBA/MBA package of layers was shaped (basically the depth decreases toward the north-east corner of the plateau). However, in the area where the stratum is thickest, that is, where the soil apparently accumulated due to denudation processes, we record stone pavements and surfaces of postholes at different levels. This means that the denudation process did not set in suddenly at one particular moment in time, e.g. after the abandonment of the settlement, but rather occurred constantly during and between consecutive periods of occupation. In addition, the analysis of pottery refits (of different phases of the LBA/EIA settlement) shows that quite often (in 32% of all cases) pieces of the same vessel were found far away from each other (farther than 1 m and up to 5 m) and that the distribution of matching fragments follows the terrain relief. It is worth mentioning that a completely different pattern may be observed

with regard to the EBA/MBA settlement. Here, nearly all of the fragments of pottery that we were able to refit were distributed in close proximity to each other. There are some observations suggesting that although soil movement occurred during all of the phases of the younger settlement, it accelerated particularly during the final stage of the LBA (i.e. the younger phase of Ha B and Ha C). To this period, we may attribute pottery from the trench excavated in 2010–2011, which was discovered in the layers below the eastern edge of the plateau. A similar interpretation can be proposed for some observations made during the excavations in

the western part of the site. In trench No. 4 (of the 2011 excavations), located on a ledge directly below the western edge of the plateau, we documented a thick layer of mixed soil and clay, which apparently accumulated here due to the rapid erosion of the material in the higher parts of the settlement (Fig. 3). This layer contained only LBA pottery, which might indicate that the erosion event took place before the EIA phase of occupation. Moreover, we found two partially preserved pits of the LBA in this layer whose upper portions were literally cut off. We assume that this was due to a massive run-off of soil and clayish bedrock (a landslide?)



**Fig. 4** Examples of Early Bronze Age structures: a stone pavement found at a depth of 40 cm (a) covering tub-shaped pits from the Early Iron Age (b), north-western corner of the stronghold; the outline of a large structure (possibly a house) from the La Tène period, with the preserved stone-lined foundations of the walls (drawing by J. Jędrzyk).



**Fig. 5** Types of pits from the LBA/EIA settlement in Maszkowice (drawing by J. Jędrzyk).

down the western slope. Another observation which points to the intensive operation of post-depositional processes in the western part of the site during the LBA can be deduced from the results of the «old» excavations. This is a stratigraphic sequence discernible in the 1963 trenches located in this area, which includes only EIA structures, such as pits, covered by stone pavements (Fig. 4a, b).

Summing up, it seems that only limited and small-scale run-off of soil occurred at the eastern and northern edge of the plateau. This makes it likely that the extent of the cultural layer in this part of the site mirrors the original distribution of households during the LBA-EIA period. However, it appears that a massive erosion event (or series of events) took place at the western rim of the site during the LBA, which might have partially destroyed the remains of the older settlements.

In contrast to the «edge zone» of the site, with its deep cultural layer and archaeological structures limited to postholes and stone concentrations, the central part of the plateau is densely strewn with pits of different shapes and sizes (Fig. 2). Since this area was the main target of the «old» excavations, only less than half of the features can now be properly dated and described. Nevertheless, the picture emerging from our analysis appears to be clear: Those pits which originate from the LBA (Maszkowice IV–VI) are distributed along the «edge zone» of the site. This means that they were most probably located immediately behind the line of households, leaving a flat, empty space about 30 m in

diameter empty in the central part of the settlement. This pattern of spatial organization is interesting because it follows the layout of the older EBA/MBA settlement. It is also noteworthy that this pattern was no longer respected during the EIA. Pits dated to the HaD period (Maszkowice VII) are located, among others, in the central area, which had been left empty before this time. The alteration of the spatial organization of the settlement is even more distinct in the Pre-Roman period (Maszkowice VIII). The presence of large features (see below) as well clusters of small pits in the central zone of the site may suggest that at this time, the settlement on Zyndram Hill consisted of a number of individual households scattered across different parts of the plateau.

### Pits and house remains

Based on the data collected during both the old and the new excavations, it is possible to demonstrate certain chronological tendencies concerning the types of settlement features (Fig. 5). During the building phases Maszkowice IV–VI (c. 900–700 BC), shallow pits predominate. They are oval in plan, 1–1.5 m in diameter and their depth does not exceed one metre (Type 2.a, see Fig. 5). In cross-section they are semi-oval. Numerous features of this type were identified during the «old» excavations, but only one in our trenches. Taking into account that a concentration of charred cereal grains was found at the bottom of the latter, we may

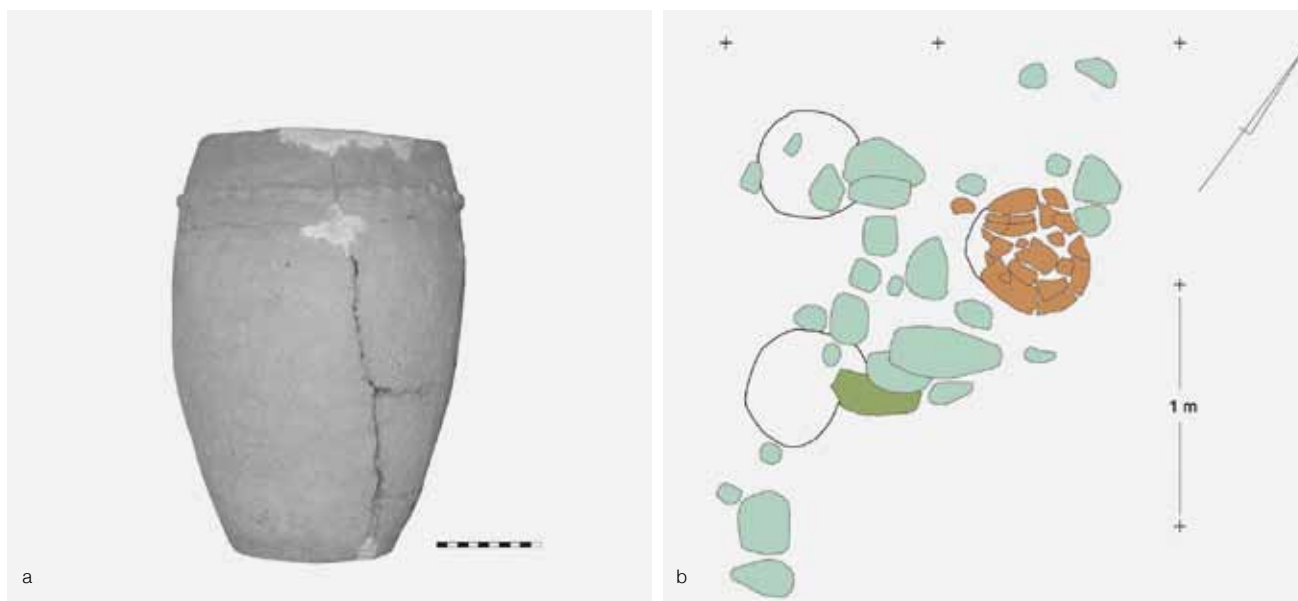
assume it functioned as a storage pit. Another type of feature which is associated with the LBA settlement consists of pits with a trapeze-shaped cross-section (Type 1.a, see Fig. 5). They have a flat, spacious bottom, and their depth exceeds one metre. As was mentioned above, the lower portions of such features were discovered, among others, directly below the western edge of plateau in 2011.

Features connected with the building phases Maszkowice VII–VIII included some very shallow oval pits (Type 2.b, see Fig. 5). In addition, some small features of oval or rectangular shape also deserve attention. They are usually rather shallow, but sometimes reach a depth of approx. 50 cm. In cross-section their bottom is flat, which gives them a tub-like shape (Type 3; 4; see Fig. 4b, 5). Their infill typically lacks a significant amount of artefacts, which makes the estimation of their age difficult. However, all of the more securely dated features seem to originate from the Early Iron Age and Pre-Roman Period. During the 2015 excavations, one example of a tub-shaped feature was uncovered on the gentle slope outside the hilltop settlement, some twenty metres from and almost ten metres below the eastern edge of the plateau. The pit was rectangular in plan, about 1.2 m long and 0.8 m wide. Its infill was riddled with burnt brocks and sandstone blocks, whilst its flat bottom was covered by a layer of charcoal. Similar tub-shaped features are known from numerous sites in south-eastern Poland and northern Slovakia, and are most often associated with the Ro-

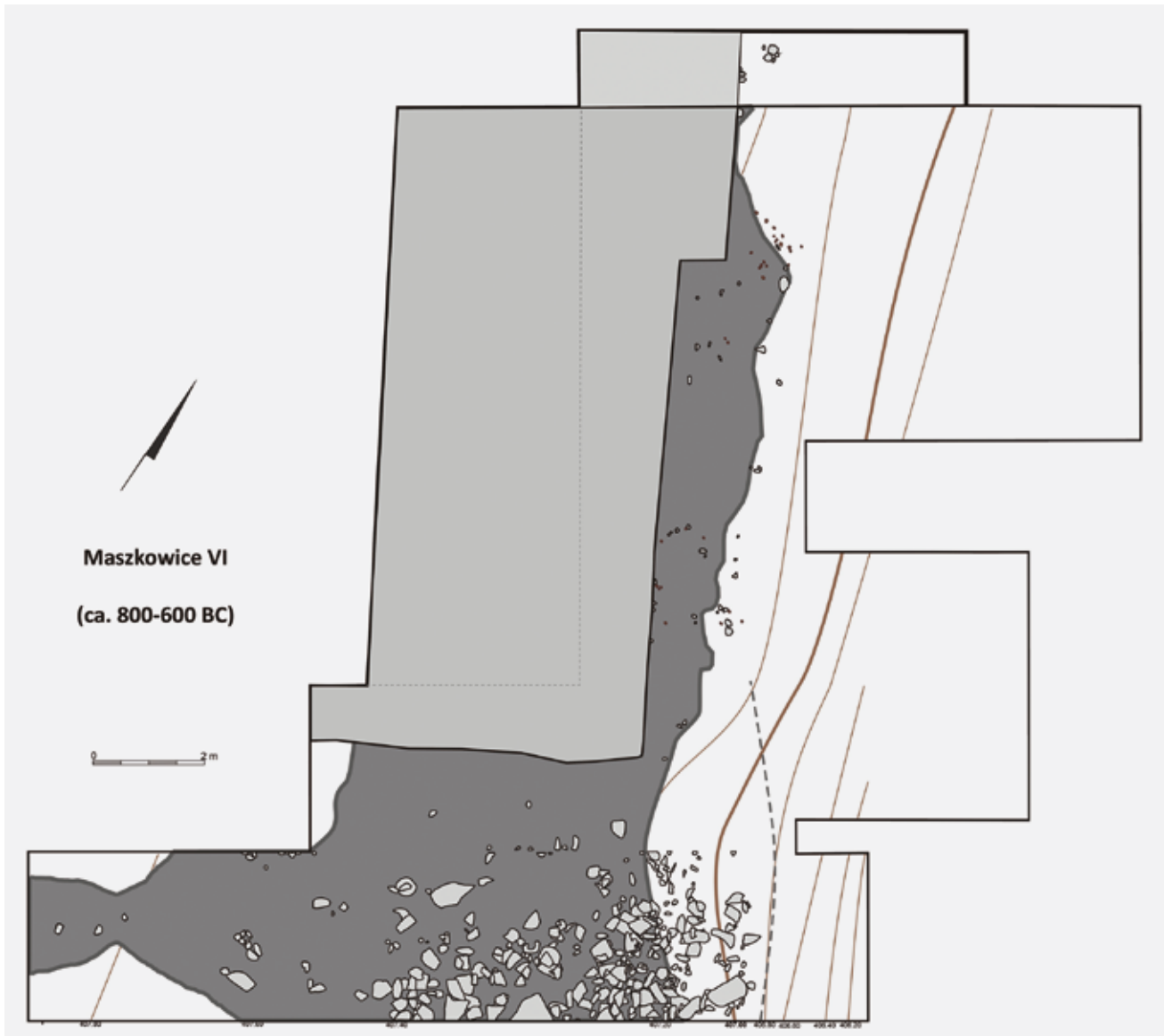
man Period, although they occur in the Pre-Roman (or La Tène) Period as well.<sup>11</sup> The pits usually occur in clusters. In Pakoszówka (Sanok district), for instance, they constitute a separate zone, which is assumed to be connected with specialized craft production.<sup>12</sup>

Among the trends that appeared during the EIA and Pre-Roman phase of the settlement on Zyndram Hill, mention must be made of the presence of storage vessels deliberately sunk into the ground. Good examples are a large vase discovered in 1972 (Fig. 6b) which was set into the clayish bedrock and surrounded by a stone circle, and another large vessel, sunk into the infill of an older pit, which was found in 1968 (Fig. 6a). It is possible that a correlation existed between the phasing out of deeper pits (especially those of a trapezoid section) recorded for the transition from the LBA to the EIA, and the appearance of a new method of food storage, which manifested itself in the use of large vessels sunk into ground.

Relics of LBA/EIA buildings are limited mainly to postholes and a cultural layer. Based on the data currently at our disposal, we are able to attempt a preliminary reconstruction of the arrangement and appearance of dwellings. The distribution of postholes which are supposed to be more or less contemporary (having the same depth and similar size) allows us to assume that the buildings were situated close to each other along the edge of the terrace (see below). Their walls were of timber-framed construction, with wattle-and-daub panelling which is evidenced by



**Fig. 6** Examples of storage vessels sunk into the ground: a large storage vessel discovered within the EIA cultural layer at a depth of 30 cm (a); a similar feature dated to the La Tène period (b) in its context (drawing by J. Jędrzyk).



**Fig. 7** Deposits of the sixth building phase found in the trench excavated in 2010–2014. A large pavement built of sandstone blocks can be made out in the southern part (drawing by M. S. Przybyła).

numerous concentrations of burnt clay. Due to the nature of the LBA/EIA cultural layer (accumulated as a result of constant small-scale denudation) it is generally impossible to identify the actual floor levels of the houses. We did, however, discover a portion of a large, rectangular structure built of sandstone blocks in 2010–2012 (Fig. 7). It would originally have covered at least 25 square metres, and it can be interpreted as the platform of a house dated to the final stage of the LBA (Maszkowice Phase VI). The layout of dwellings and the storage pits located in their close vicin-

ity clearly repeats the spatial pattern of the EBA/MBA settlement.

As mentioned above, the distribution of pits displays a distinct alteration in the organization of settlement space which took place during the transition from the LBA to the EIA. It is possible to attribute to Phase Maszkowice VII (c. 600–400 BC) the stone pavements which have been uncovered predominantly at the edge of the northern and eastern terraces. They are made of pebbles from the Dunajec River, which were densely packed into one or two layers. The pavements are rec-

<sup>11</sup> KOTOWICZ AND GLINIANOWICZ 2010, 96–97; PIETA 2010, Fig. 44.

<sup>12</sup> MADYDA-LEGUTKO ET AL. 2006, 160; Fig. 3.



**Fig. 8** A large pavement built of river pebbles, dated to Phase Maszkowice VII (c. 600–400 BC) in the 2016 trench (photograph by M. S. Przybyła).

tangular or oval in shape, and can be as large as four meters in diameter (Fig. 4a). Some of them have gaps in their surface, most probably where a wooden post had stood.<sup>13</sup> The pavements also tend to cluster and form larger structures, as in the case of the example, approximately six metres long, which was discovered in 2016 (Fig. 8). They most probably formed a part of house floors, and their localization – exclusively in the area of the EBA clay terrace – allows us to assume that they were intended to reinforce the eroding surface at the edge of the plateau.

Another structure which represents the youngest phase of the settlement (Maszkowice VIII) is a portion of a dwelling discovered in 1972 at the western edge of the plateau (Fig. 4c). Its walls had foundations made of relatively small pieces of local sandstone. The presence of round gaps in the thick stone structure suggests that the house originally had wooden walls which were supported by posts. An additional function of this feature may have been heat insulation.<sup>14</sup> Similarly constructed dwellings are known, among others, from slightly older (EIA Lusatian culture) settlements in the Western Carpathians, e.g. Dolný Kubín-Medzihradné<sup>15</sup> and Vyšný Kubín-Tupá skala,<sup>16</sup> as well as from the Pre-Roman settlement in Liptovská Mara.<sup>17</sup>

## Fortifications

The most significant finding provided by our analysis is that after a gap in the site's occupation of at least 500 years, the general layout of the settlement in the LBA

(Maszkowice IV–VI) seems to follow the same pattern as in the EBA/MBA phase. A possible explanation of this phenomenon may be that the monumental stone wall which had been built at the very beginning of the EBA/MBA settlement was still there for the new settlers to see. According to the stratigraphic record, the wall had been partially destroyed (a process that had already started prior to the end of the EBA/MBA settlement), but it was certainly not the meagre relic that we know from our archaeological trenches, but a substantial structure still capable of protecting the interior of the settlement. It is not inconceivable then that the presence of a discernible stone enclosure constituted one of the factors which convinced a group of newcomers to establish their settlement on Zyndram Hill. The adaptation of this settlement's layout to the existing course of the wall might well have been a practical solution which unwittingly followed earlier patterns of spatial organization. The outer walls of the dwellings located next to the edge of the northern and eastern terraces then became an additional line of the fortification system.

The settlement layout underwent changes at the transition from the LBA to the EIA (see above, Fig. 2). It seems that the alteration might have been forced at least partly by erosion in the edge zone of the plateau. Due to the intensive occupation in this area, the clay terraces and the relics of the older stone wall may have become less stable, leading to further degradation. With this period of time, we may also associate a row of postholes dug into the EBA clay embankment close to

<sup>13</sup> Compare e.g. Letanovce: MIROŠAYOVÁ 1999, Fig. 11, 12.

<sup>14</sup> FURMÁNEK ET AL. 1991, 201–202.

<sup>15</sup> ČAPLOVIČ 1975, 42–4; Fig. 20.

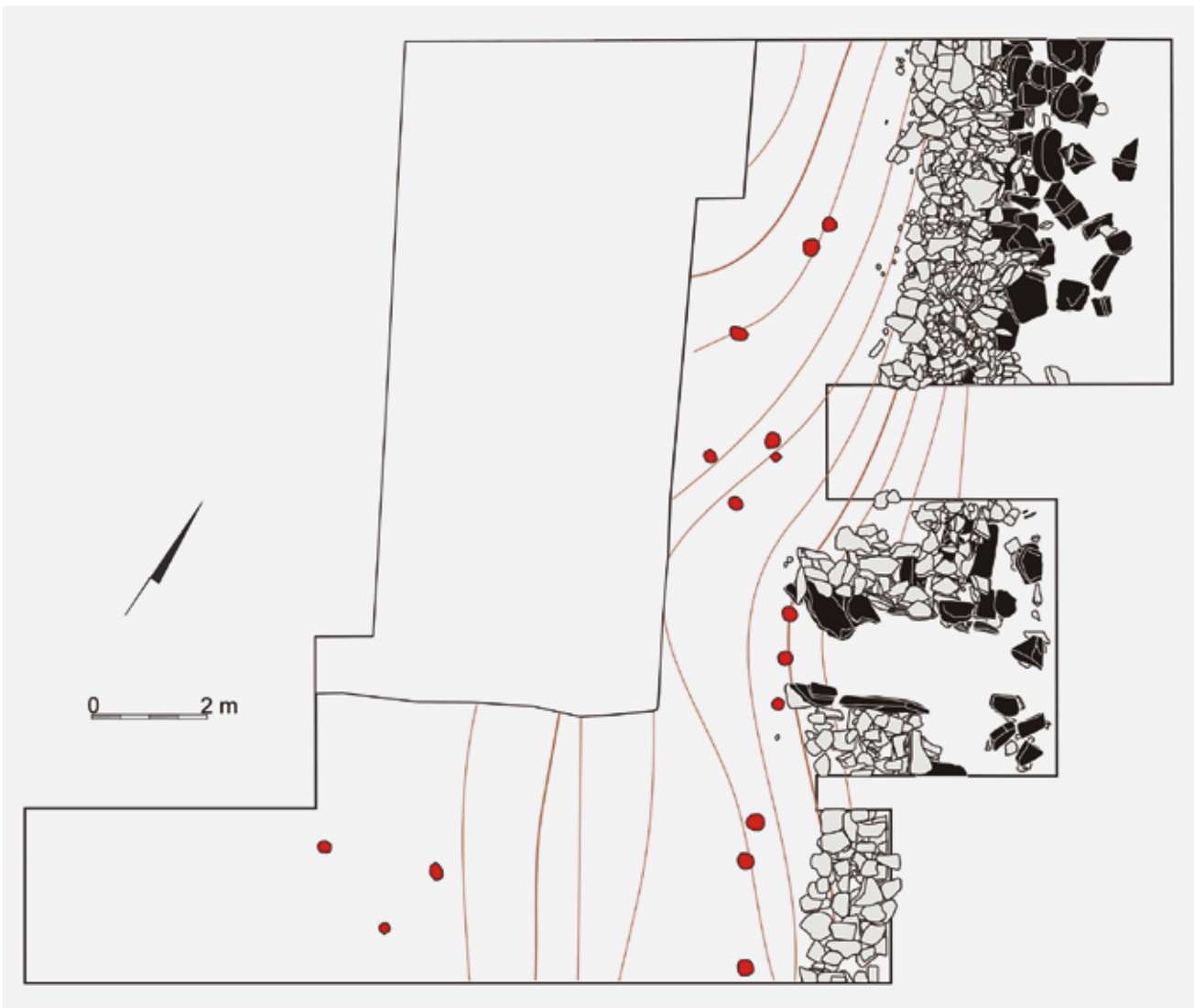
<sup>16</sup> ČAPLOVIČ 1987; Fig. 53.

<sup>17</sup> PIETA 2010, 101; Fig. 48.



the line of the damaged stone wall (Fig. 9). Originally, they may have belonged either to a kind of a light fence built in wattle-and-daub technique, or to the outer walls of a row of densely arranged houses. In any case, the endeavour to construct and maintain a new, defensive line built of wood may have been dictated by the progressive decay of the older stone construction. At the same time, the rubble of the EBA wall was probably exploited as a source of construction material. The larger stone blocks in particular, which constituted the sandstone pavements or were used to support the walls of buildings, are identical in size to the building material used for the inner part of the EBA fortification. When discussing the fortifications of the younger settlement one has to mention a short segment of a ditch which was uncovered in a test trench opened in 2015 on the eastern slope, just below the line of

stone fortifications. The structure is fairly deep (approx. 2 m) and has a flat bottom. Its infill is homogenous and consists of black soil mingled with large sandstone blocks. This means that the material was accumulated over a relatively short time span, which in turn allows us to assume that the feature was not left open (like a fosse or moat), but served instead as a slit trench for emplacing a palisade. Although the stones discovered within this feature probably originate from the outer face of the already crumbling EBA wall, and the consistency and colour of the soil filling the ditch resemble the occupational layer of the younger settlement, the dating of the feature remains a matter of debate. We are definitely going to investigate this aspect in more detail in the course of future excavation campaigns.



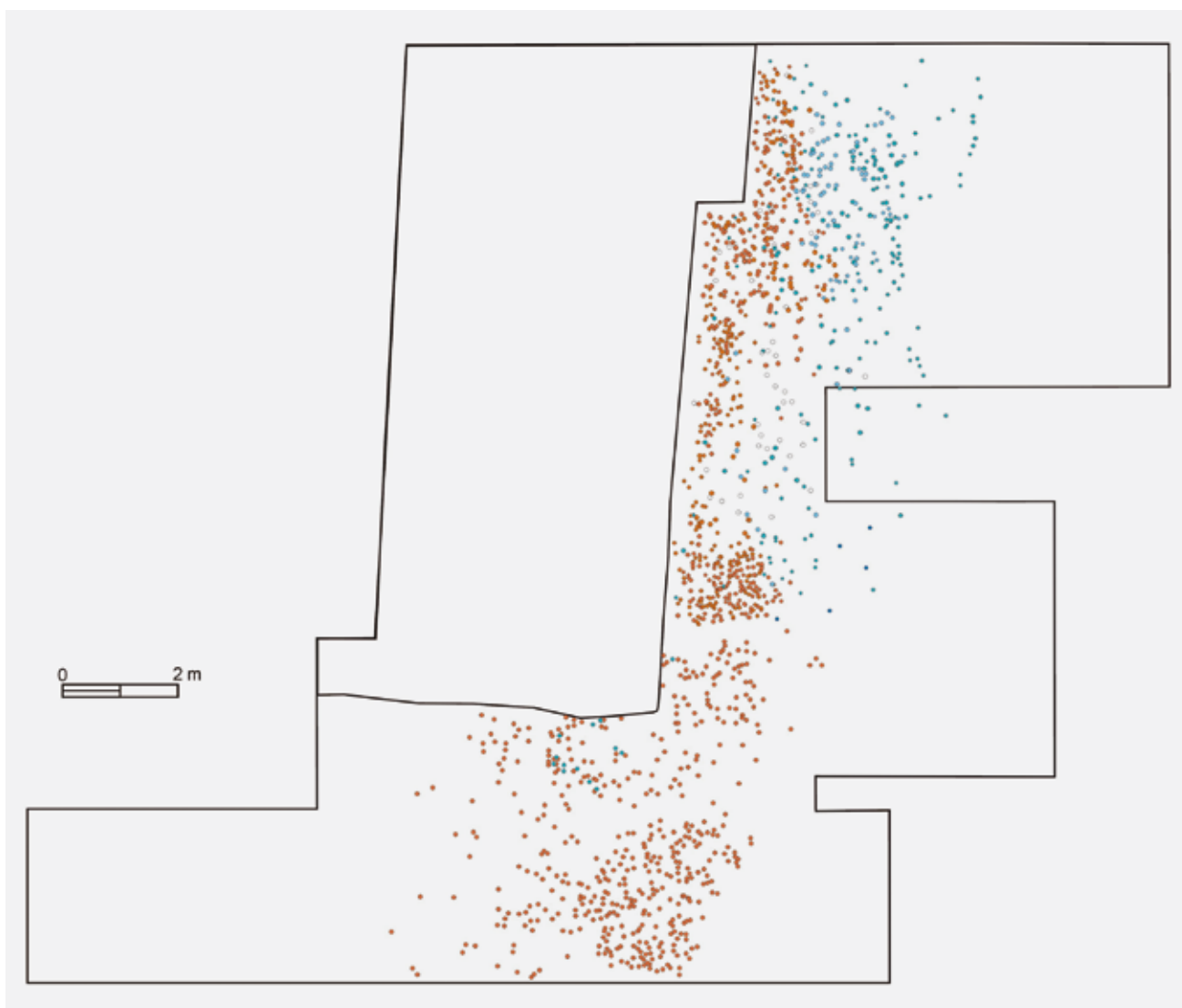
**Fig. 9** An Early Bronze Age stone wall with a gateway, and a row of large posts (in red) which follow the same line, dated to the Bronze/Iron Age transition (drawing by M. S. Przybyła).

## Subsistence and local settlement context

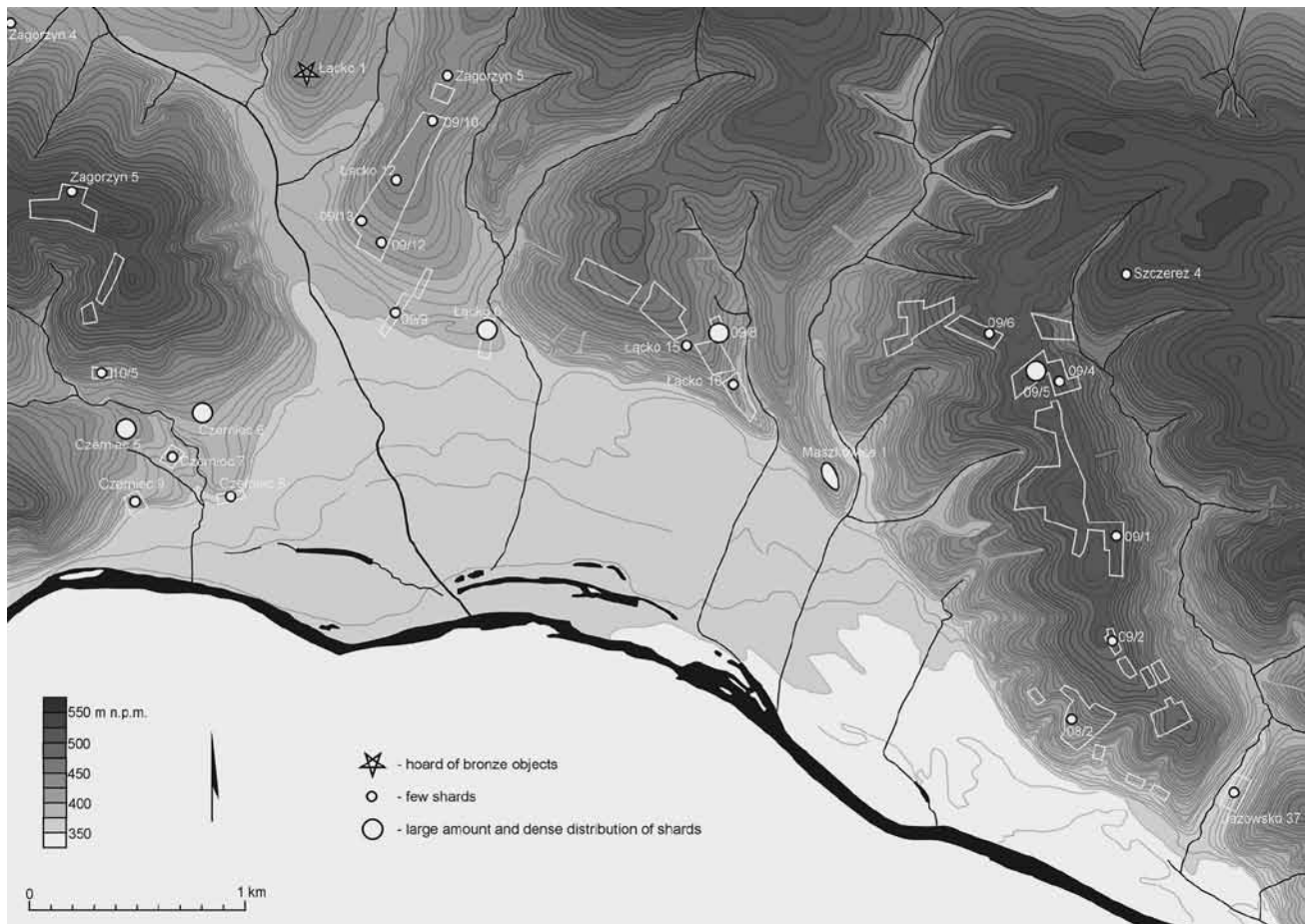
One of the elements which make the stronghold on the Zydram Hill so interesting is the fact that the stone constructions erected at the very beginning of the site's occupation were reused during the younger occupation phase. Following the course of the fortifications, the arrangement of LBA houses and pits repeated that of the EBA/MBA, a pattern which only changed in the EIA. A general similarity between the older and younger occupational phases can also be observed with regard to subsistence strategies, perhaps resulting from the nature of the inhabited environment, although certain (often significant) differences occur as well.

In both phases, cattle herding and the agricultural exploitation of extensive swathes of land in the broad

valley of the Dunajec River played a predominant role. The general pattern of animal herding seems similar for both phases, and is distinguished by a clear predominance of cattle over other species. Apart from this general picture, however, the detailed spatial analysis of the distribution of skeletal remains revealed certain differences, which shed some light on an important aspect of everyday life of the residents of the stronghold. Those deposits associated with the dwellings of the older occupation phase yielded numerous animal bones, whereas those in the LBA/EIA layer contained only few bones. The analysis of animal remains found in the trenches explored in 2010–2014 revealed that in the older settlement, bones occurred almost exclusively inside the dwellings, where they formed compact clusters. On the other hand, the bone material which



**Fig. 10** Distribution of animal bones within the trench from 2010–2015; a difference can be seen in the ranges of the bones from EBA/MBA (red) and LBA/EIA (blue), reflecting different patterns of waste disposal (drawn by M. S. Przybyła).



**Fig. 11** The distribution of archaeological sites dated to LBA/EIA in the Łącko Basin (after Przybyła and Skoneczna 2014).

can be stratigraphically linked to the younger settlement was discovered in a narrow band (some 1.5–2 m wide) which ran along the edge of the plateau and the fortifications – and thus generally beyond the zone where the relics of the LBA/EIA dwellings were found (Fig. 10).

This phenomenon is surely not the result of postdepositional processes such as slope erosion or even soil acidity (considering that the bones of the older phase are so well preserved). The most probable explanation is that, unlike in the older phase, animal bones were now deposited outside of the households of the younger settlement. The relatively lower number of the younger finds may stem from a specific subsistence pattern, e.g. a lower frequency of slaughtering or butchering animals outside the settlement, while the difference in spatial distribution may reflect deviating

traditions with regard to consumption or waste disposal in the two phases.

Significant changes can also be observed in the composition of crops. Whereas the predominant crop in the EBA/MBA settlement was wheat (79% among the identified cereal remains from within dwellings), which was probably cultivated on fertile alluvial soils in the Dunajec valley, this role was played by barley (again with 79% of the identified cereal remains) in the LBA/EIA settlement. This change may reflect the relocation of cultivation to higher-lying areas marked by less favourable soil conditions.<sup>18</sup>

In analysing the micro- and mezzo-regional settlement structures in the Dunajec valley, we can detect a sharp contrast in settlement density between the EBA/MBA and LBA/EIA phases. During the older phase of occupation (Maszkowice I–III) the site was an isolated fortified outpost, with no traces of further contemporary occupation in its vicinity. The closest securely-dated site of a similar chronological classification is the hilltop settlement at Marcinkowice,<sup>19</sup> approximately 25 km from Maszkowice. Despite this apparent isola-

<sup>18</sup> PRZYBYŁA ET AL. 2012, 252–262; KORCZYŃSKA ET AL. 2015, 233.

<sup>19</sup> KADROW AND MACHNIK 1997, 121, 130; PRZYBYŁA 2009, 230–232.

tion, individual artefacts originating from areas hundreds kilometres away, such as amber,<sup>20</sup> testify to the important position of Maszkowice on a trade route running along the Dunajec to the southern part of the Western Carpathians.

In the LBA/EIA, the network of settlements in the upper Dunajec valley became considerably denser. The surface surveys carried out in the Łącko Basin and neighbouring areas revealed 16 settlement sites associated with this period (Fig. 11). These sites tend to be found in three different ecological zones: the slopes of terraces (5 sites), spurs and hilltops along the northern edge of the Łącko Basin (9 sites, including the Maszkowice stronghold), and the summits of the Beskid Wyspowy hills (2 sites). Both the attractive localisation and the still visible stone fortifications are likely reasons that the site at Maszkowice was settled again in this period. However, it probably played a different role now as an element of a populous micro-region, perhaps competing with other settlements nearby, but definitely no longer an isolated outpost on an important communication route.

In spite of this changed role, exotic objects such as glass beads and numerous iron artefacts still continued to reach the settlement on Zyndram Hill. The long-distance and multi-directional contacts maintained by its inhabitants can also be traced through comparative analyses of pottery. Beginning with the LBA, the pottery discovered on our site comprises fragments representing a ceramic style which is typical for the entire upper Vistula basin, but nevertheless displays the influence of trans-carpathian traditions (of the Kyjatyce and late Gáva culture). In the period corresponding to the time when the younger settlement on Zyndram Hill was founded,<sup>21</sup> a whole network of settlements was established in defensible locations along the Dunajec river, some of which have been investigated by archaeologists: Marcinkowice, Naszacowice, Nowy Sącz-Biegonice and Stary Sącz-Na Lipiu.<sup>22</sup>

Apart from Maszkowice, human occupation was also recorded for a slightly later period, the transition from the younger phase of Ha B to Ha C, on the sites of Marcinkowice and Nowy Sącz-Biegonice, and for the fully developed Hallstatt and early La Tène periods, in Podegrodzie and Zabrzeż.<sup>23</sup> During the late La Tène period (Maszkowice VIII), Zyndram Hill was inhabited by people of the Púchov culture, who are generally as-

sociated with central and western Slovakia. The old excavations produced a fragment of a fibula representing the Slovenské Pravno type<sup>24</sup> which in the light of past research can be seen as proof that this episode in the history of the Maszkowice site lasted through phases LtC2–LtD1 (c. 220–60 BC).

## Conclusions

1. The layout of the younger (LBA) settlement of Maszkowice repeats the pattern of the EBA/MBA village which preceded it by some 500 years. This most likely the result of the new settlers exploiting the surviving stone fortifications and adjusting the arrangement of their buildings to them. To a certain degree this may also be a reflection of the subsistence pattern being generally similar in both phases (with the focus on cattle herding).
2. The differences between the EBA, MBA and LBA settlements can be made out in the details – in the manner of house construction or habits related to waste disposal.
3. Unlike the deposits of the older settlement, those associated with the younger phase have been transformed to a much greater degree by the operation of post-depositional processes. In particular, traces of large-scale erosion dating to the Bronze/Early Iron Age transition can be observed in the western part of the site.
4. The Early Iron Age saw a distinct change in the layout of the settlement. The residential area was moved towards the central part of the plateau, a tendency which continued in the Pre-Roman Period. The removal of houses away from the line of the former fortifications may have been caused by the advancing decay of the latter. The large pavements of river cobbles, dated to 600–400 BC, may be interpreted as an attempt to reinforce the crumbling terrace.
5. The changes in the layout of the settlement are embedded in the context of the transformation of the entire settlement network in the vicinity of the site. While the settlement on Zyndram Hill seems to have been the only inhabited site in the area in the EBA/MBA, it became one element among many of a larger settlement cluster in the LBA, and the EIA in particular.

<sup>20</sup> PRZYBYŁA 2009, 372–373; 2016; PRZYBYŁA AND SKONECZNA 2014.

<sup>21</sup> The Stary Sącz phase: PRZYBYŁA 2009, 240–245, Fig. 68.

<sup>22</sup> TRZEPACZ-CABALSKA 1959; CABALSKA ET AL. 1990; POLESKI 2004, 222–227, 292–293; PRZYBYŁA 2009, 201–224.

<sup>23</sup> MADYDA-LEGUTKO 1995, 256.

<sup>24</sup> CABALSKA 1984; MADYDA-LEGUTKO 1996, 32.

## Acknowledgments

The research in Maszkowice has been financed by the Faculty of History of the Jagiellonian University and by the National Science Centre (OPUS 10, UMO-2015/19/B/HS3/01053). We would like to thank the specialists whose observations have been used in this paper:

Aldona Bieniek from the Institute of Botany of the Polish Academy of Sciences, and Ulana Gocman from the Jagiellonian University. We are also very grateful to all those who participated in the excavations and to the persons and institutions who supported our research.

## Bibliography

- Bradley 2002  
R. Bradley, *The past in prehistoric societies* (London/New York 2002).
- Cabalska 1977  
M. Cabalska, Hillfort and fortified settlement of Lusatian culture in Maszkowice, Voivodship of Nowy Sącz. *Archaeologia Polona* 18, 1977, 107–136.
- Cabalska et al. 1990  
M. Cabalska/R. Madyda-Legutko/K. Tunia, Wyniki badań stanowiska z epoki brązu, początków epoki żelaza i z późnego okresu rzymskiego w Nowym Sączu-Biegonicach. *Acta Archaeologica Carpathica* 29, 1990, 163–214.
- Čaplovič 1975  
P. Čaplovič, Sídliisko lužickéj kultúry v Dolnom Kubíne-Medzihradnom. *Archeologické výskumy a nálezy na Slovensku v roku 1974*, 42–43.
- Čaplovič 1987  
P. Čaplovič, Orava v praveku, vo včasnej dobe dejinnej a na začiatku stredoveku, (Martin 1987).
- Demetrykiewicz 1907  
W. Demetrykiewicz, Posiedzenie z dnia 28. czerwca 1906 r., *Materyały Antropologiczno-Archeologiczne i Etnograficzne* 9, 1907, IX.
- Furmánek et al. 1991  
V. Furmánek/L. Veliačik/J. Vladár, Slovensko w dobe bronzowej (Bratislava 1991).
- Kadrow and Machnik 1997  
S. Kadrow/J. Machnik, *Kultura mierzanowicka. Chronologia, taksonomia i rozwój przestrzenny* (Kraków 1997).
- Korczyńska et al. 2015  
M. Korczyńska/K. Cappenberg/T. Kienlin, Lauter Lausitzer Burgwälle? Zur Bedeutung landwirtschaftlicher Gunstfaktoren während der späten Bronzezeit und frühen Eisenzeit entlang des Dunajec. In: J. Gancarski (ed.), *Pradziejowe osady obronne w Karpatach* (Krosno 2015) 215–244.
- Kotowicz and Glinianowicz 2010  
P. Kotowicz/M. Glinianowicz, Kolejne odkrycia archeologiczne na wielokulturowej osadzie w Sanoku-Olchowcach, stan. 10. *Materiały i Sprawozdania Rzeszowskiego Ośrodka Archeologicznego* 10, 2010, 93–100.
- Madyda-Legutko 1995  
R. Madyda-Legutko, Sytuacja kulturowa we wczesnej epoce żelaza na terenie polskiej części Karpat Zachodnich. In: J. Szydlowski (ed.), *Dziedzictwo kulturowe epoki brązu i wczesnej epoki żelaza na Górnym Śląsku i w Małopolsce. Śląskie prace prahistoryczne 4* (Katowice 1995) 241–263.
- Madyda-Legutko 1996  
R. Madyda-Legutko, Zróżnicowanie polskiej strefy beskidzkiej w okresie lateńskim i rzymskim (Kraków 1996).
- Madyda-Legutko et al. 2006  
R. Madyda-Legutko/E. Pohorska-Kleja/J. Rodzińska-Nowak, Pakoszówka, Gde. Sanok, Woiv. Podkarpackie, Fst. 1 (eine Siedlung der römischen Kaiserzeit). *Recherches Archéologiques de 1999–2003*, 160–168.
- Miroššayová 1999  
E. Miroššayová, Výšinné hradisko na Kláštorisku-Čertovej sihoti v Letanovciach. *Slovenská Archeológia* 48:1, 1999, 129–152.
- Pieta 2010  
K. Pieta, Die keltische Besiedlung der Slowakei: Jüngere Laténezeit (Nitra 2010).
- Poleski 2004  
J. Poleski, *Wczesnośredniowieczne grody w dorzeczu Dunajca* (Kraków 2004).
- Przybyła 2009  
M. S. Przybyła, Inter-cultural contacts in the Western Carpathian area at the turn of the 2<sup>nd</sup> and 1<sup>st</sup> millennia BC (Warsaw 2009).
- Przybyła 2016  
M. S. Przybyła, Early Bronze Age stone architecture discovered in Polish Carpathians. *Archaeologisches Korrespondenzblatt* 46/3, 2016, 291–308.
- Przybyła and Skoneczna 2011  
M. S. 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* 3, 2011, 5–66.
- Przybyła and Skoneczna 2014  
M. S. Przybyła/M. Skoneczna, The Bronze Age settlement in Maszkowice (Western Carpathians) – Analyses and interpre-

tations. In: T. Kienlin/P. Valde-Nowak/M. Korczyńska/  
K. Cappenberg/J. Ociepka (eds.), Settlement, communication  
and exchange around the Western Carpathians. International  
workshop held at the Institute of Archaeology, Jagiellonian  
University, Kraków, October 27<sup>th</sup>–28<sup>th</sup>, 2012 (Kraków 2014)  
265–286.

Przybyła et al. 2012

M. S. Przybyła/M. Skoneczna/A. Vitoš, Interregional con-  
tacts or local adaptation? Studies on the defensive settlement  
from the Bronze and Early Iron Age in Maszkowice (West-  
ern Carpathians). In: M. Jaeger/J. Czebreszuk/K. Fischl (eds.),  
Enclosed space – open society. Contact and exchange in the  
context of Bronze Age fortified settlements in Central Europe  
(Poznań-Bonn 2012) 225–274.

Stoneman 1994

R. Stoneman, A literary companion to travel in Greece  
(Malibu 1994).

Trzepacz-Cabalska 1959

M. Trzepacz-Cabalska, Sprawozdanie z badań archeologic-  
znych w Starym Sączu, pow. Nowy Sącz przeprowadzonych  
w latach 1959–1957. Wiadomości Archeologiczne 26, 1959,  
176–180.