

**MODELLI DI INSEDIAMENTO E PAESAGGI ANTROPICI DELLE REGIONI COSTIERE  
NORD-ADRIATICHE TRA MEDIO E TARDO BRONZO**  
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**SETTLEMENT PATTERNS IN THE EASTERN AND CENTRAL SLOVENIA DURING THE MIDDLE AND  
THE LATE BRONZE AGE (THE OLORIS – PODSMREKA HORIZON)**

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**KEYWORDS**

Eastern and Central Slovenia, Middle and Late Bronze Age, Oloris – Podsmreka horizon, settlements, ceramics, chronology

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Slovenia orientale e centrale, Età del Bronzo medio e recente, orizzonte Oloris – Podsmreka, insediamenti, ceramica, cronologia

**ABSTRACT**

The article represents a short synthesis about settlements from the Middle and the beginning of the Late Bronze Age in central and eastern regions of Slovenia. Special attention is given to two key-sites, Medvode-Svetje and Trata near Škofja Loka, both from the Gorenjska region. Numerous archaeological excavations and subsequent research publications in the last two decades brought about new insights on dwelling features, forms of housing and on settlement characteristics itself. At the same time, a completely new understanding of the spectre of ceramic repertoire has been obtained, while new radiocarbon dating results enable us to complement the absolute chronology of the given time period.

**RIASSUNTO**

L'articolo espone una sintesi sugli insediamenti nella Slovenia centrale e orientale attribuiti all'età del Bronzo Medio e Recente. Vengono presentati due siti chiave, Medvode-Svetje e Trata presso Škofja Loka nella regione di Gorenjska. Negli ultimi vent'anni, ripetuti scavi archeologici e pubblicazioni scientifiche hanno permesso di ampliare la nostra conoscenza sulle strutture insediative e la cronotipologia dei reperti ceramici. Nuove date al radiocarbonio hanno precisato la cronologia assoluta di questo periodo.

**INTRODUCTION**

Only two decades ago, our knowledge about the Middle Bronze Age settlement patterns and their spatial organization in central and eastern Slovenia was next to nothing. Due to extensive archaeological excavations launched in connection with highway construction works from the late 1990s onwards, the number of settlements attributed to the Middle and the beginning of Late Bronze Age (Br B2/C1 – Br D) has increased notably, especially in the Dolenjska, Štajerska and Prekmurje regions in the south-eastern and north-eastern parts of Slovenia. Subsequent archaeological investigations and a series of new radiocarbon dates from closed and secure archaeological contexts as well as a completely new repertoire of settlement ceramics nowadays considerably widen our perspectives on the Bronze Age settlement features and their dating. Moreover, the new chronological framework based on the radiocarbon dates made progress in understanding the period of the Middle and the Late Bronze Age. On the basis of the absolute dates from newly discovered settlements, the Oloris – Podsmreka horizon was set in the period from the second half of the 16<sup>th</sup>/first half of the 15<sup>th</sup> century BC until the end of the 13<sup>th</sup>/beginning of the 12<sup>th</sup> century BC.

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Of all the newly discovered Middle and Late Bronze Age sites, the settlements at Medvode-Svetje and Trata near Škofja Loka exposed in this paper, are among the most interesting sites in the south-eastern Alpine region. Both represent lowland type of settlement and offer us new data about individual settlement structures, its spatial organization and settlement ceramics. Based on the stratigraphic sequence at Medvode-Svetje, three separate phases dating from the late Middle Bronze Age (Br B2/C1) until the early Urnfield period (Ha A1) have been defined. The first preliminary results from Trata near Škofja Loka with houses measuring up to 30×10 m in size indicate that we are dealing with a more complex site, most probably representing one of the central settlements in the region.

### THE MIDDLE BRONZE AGE – STATE OF RESEARCH AND CHRONOLOGY

Until recently the period of the Middle Bronze Age (Br B1 – Br C2) in Slovenia was ambiguous and very poorly understood, while the number of archaeological sites dating between the 16<sup>th</sup> and 14<sup>th</sup> centuries BC in Slovenia was very scarce. Only rare Middle Bronze Age settlements (Fig. 1: 19, 38, 54, 61), individual finds and even fewer inhumation graves were known in the territory of central and eastern part of the country (GABROVEC 1983, pp. 40–51; GABROVEC 1988/1989, pp. 116–117; DULAR 1999, pp. 85–90). In contrast to the eastern part, western parts of Slovenia showed a more nuanced archaeological situation with several locations, mostly hillforts or *castellieri* and cave sites (GABROVEC 1983, pp. 40 ff., karta 2; DULAR 1999, Karte 1; BRATINA 2018, fig. 1).

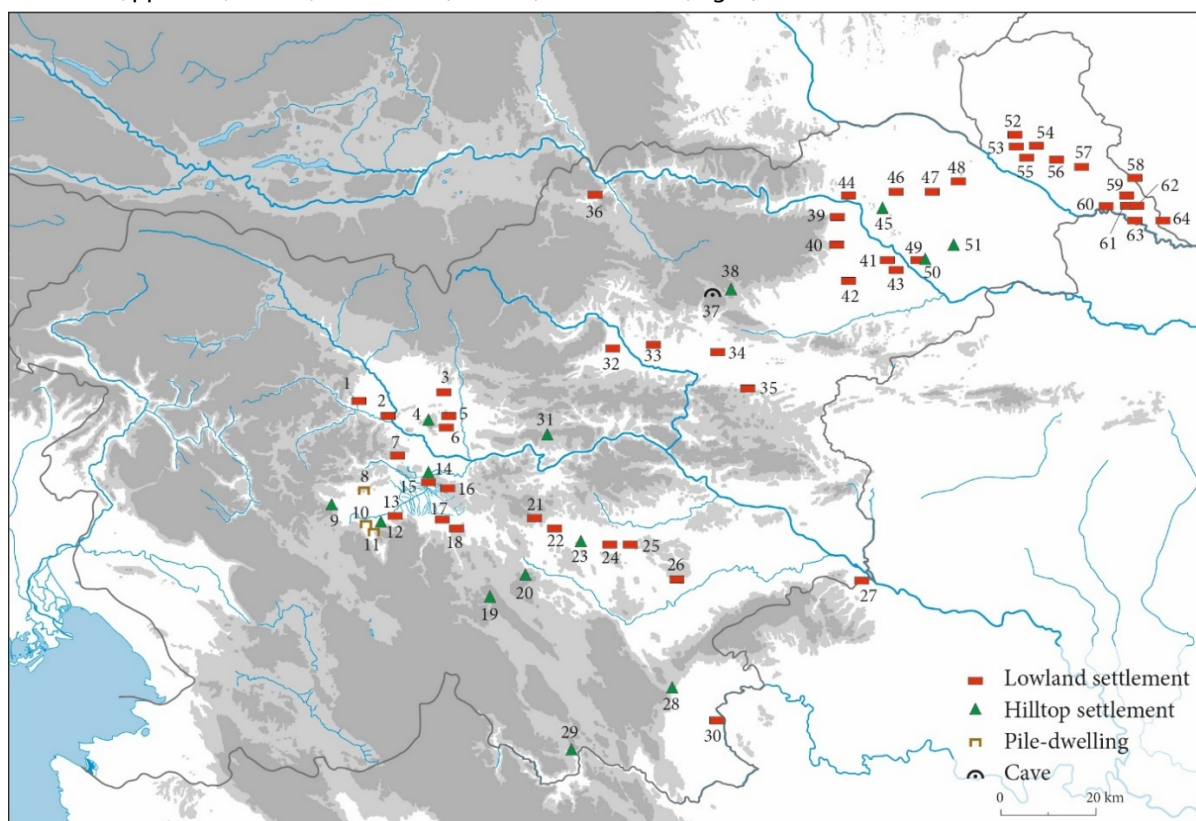


Fig. 1. Map of the settlements in Central and Eastern Slovenia dating to the Br B2/C1 – Br D phases or to the Oloris – Podsmreka horizon (supplemented after GRAHEK 2017, p. 109, fig. 6; see the references therein). Map: M. Belak.

- 1 – Trata near Škofja Loka; 2 – Medvode-Svetje; 3 – Vodice (LEGHISSA 2013); 4 – Šmarna gora; 5 – Podrečje near Vir (HORVAT 2019); 6 – Šmartno (PETERLE UDOVIČ 2007); 7 – Kamna Gorica; 8 – Bevke (ČREŠNAR 2014); 9 – Tičnica at Vrhnika (GASPARI, MASARYK 2009); 10 – Blato (VELUŠČEK, TOŠKAN, ČUFAR 2011); 11 – Šivčev prekop (KOROŠEC 1953; VELUŠČEK, TOŠKAN, ČUFAR 2011, pp. 64–65); 12 – Žabji grad (KLASINC *et alii* 2007); 13 – Jezero; 14 – Ljubljana-Grajski hrib; 15 – Ljubljana-Prule (ŽERJAL, ČERNE, NANUT 2014); 16 Rudnik (OMAN 1975); 17 – Iška Loka; 18 – Ig; 19 – Žlebič; 20 – Korinjski hrib; 21 – Podsmreka near Višnja Gora; 22 – Ivančna Gorica (PLESTENJAK *et alii* 2013); 23 – Male Dole near Stehanja vas; 24 – Dolenji Podboršt; 25 – Ponikve near Trebnje (RAVNIK, TICA 2018); 26 – Mačkovec near Novo Mesto (OMAHEN 2016); 27 – Obrežje (MASON, KRAMBERGER in prep.); 28 – Semenič above Gaber near Semič; 29 – Kostel; 30 – Krasinec (unpublished); 31 – Vače (IPAVEC 2021); 32 – Šmatevž (TICA, DJURIC 2007); 33 – Šiman near Gotovlje; 34 – Leskovec near Celje (ČEH, TOPLIČANEC 2015); 35 – Črnolica (VRENČUR 2011); 36 – Ravne na Koroškem (unpublished); 37 – Pavlakova jama (PAHIČ, KOPRIVNIK 2002); 38 – Brinjeva gora; 39 – Zgornje Radvanje (MURKO 2012); 40 – Slivnica near Maribor (STRMČNIK GULIČ 2001a; STRMČNIK GULIČ 2001b); 41 – Gerečja vas (RADOVANOVIČ *et alii* 2009, p. 21); 42 – Žutreki (LUBŠINA-TUŠEK 2003); 43 – Zgornja Hajdina (LUBŠINA TUŠEK 2007); 44 – Malečnik near Maribor (KRAMBERGER 2021); 45 – Zgornja Voličina (PAHIČ 1965, p. 47); 46 – Gomile near Lenart; 47 – Brengova (JANEŽIČ, CIGLAR, ŽIŽEK 2021); 48 – Sodolek (KAVUR 2018); 49 – Ptuj-Rabelčja vas and Osojnikova cesta (HORVAT, DOLENC VIČIČ 2010, p. 55, fig. 41); 50 – Ptuj-Ptujski grad (KOROŠEC 1951; DULAR 2013, pp. 73–75, 130, 136–177); 51 – Strjanci (PAHIČ 1962–1964; TOMANIČ JEVREMOV 1988); 52 – Grofovsko 1 (NOVŠAK, LAZAR, SANKOVIČ 2021); 53 – Pod Kotom-sever near Krog; 54 – Nova Tabla (GUŠTIN *et alii* 2017); 55 – Bratonce; 56 – Gančani (ŠAVEL 1991); 57 – Nedelica near

Turnišče; 58 – Gornje njive at Dolga vas; 59 – Gaborkert near Lendava (ŠAVEL 1994); 60 – Gosposko near Hotiza (ŠAVEL 1994); 61 – Oloris near Dolnji Lakoš; 62 – Pašnik near Gornji Lakoš (ŠAVEL 1984); 63 – Trimlini; 64 – Pince near Lendava.

Lack of archaeological data lead the Slovenian archaeologists to use the Central European chronological scheme according to Reinecke for the Middle Bronze Age period in Slovenia (Br B1 – Br C2). Moreover, chronological phases as defined by B. Hänsel, Middle Danubian II – Late Danubian I (MD II – SD I) (HÄNSEL 1968; HÄNSEL, KALICZ 1986), were in several cases also applied (e.g., DULAR 2002; DULAR 2013; TERŽAN 2013; Fig. 2). A notable step forward in the chronological sense has been recently offered by a monograph, where a series of new radiocarbon dates – among others also those from the Middle Bronze Age settlements – was published (ČREŠNAR, TERŽAN 2014, pp. 677–689). The period of the Middle Bronze Age has been separated into two horizons. The early Middle Bronze Age (the Bronze Age Tumulus Culture) correlated with Br B1 phase was dated within the span of the 16<sup>th</sup> century BC. The later part of the Middle Bronze Age correlated with Br B2/C1 and Br C2 phase and the beginning phase of the Late Bronze Age period (Br D) was denominated as the Oloris – Podsmreka horizon (Fig. 2).

BC	Central and Eastern Slovenia	Podravina, Posavina	Central Europe	Northern Italy	Carpathian Basin
1600	Bronze Age Tumulus Cultures		Bz B1	BM 1	MD II
1500	Oloris	Early	Bz B2/C1	BM 2	MD III
1400	Podsmreka horizon	Middle	Bz C2	BM 3	SD I
1300		Late	Bz D	BR 1	
1200	Rogoza - Orehova vas horizon	Zagreb - Vrapče	Ha A	BR 2	SD II
1050			Ha A2/B1	BF 1 BF 2	

Fig. 2. Chronological table of the phases/periods/horizons in the Middle and part of the Late Bronze Age (modified after ČREŠNAR, TERŽAN 2014; ŠKVOR JERNEJČIČ 2020; DE MARINIS 1999; CARDARELLI, PELLACANI, POLI 2014; HÄNSEL 1968; HÄNSEL, KALICZ 1986).

The comprehensive study on the Bronze Age in south-eastern Alpine region, included in the *Praistorija jugoslavenskih zemalja*, contained also a map of the Middle Bronze Age sites, published by S. Gabrovec. Setting apart the territory of the Castellieri culture in western Slovenia, it can be noticed that as little as four Middle Bronze Age settlements were known in the beginning of the 80s (Fig. 1: 19, 38, 54, 61; GABROVEC 1983, p. 831, map 2). Brinjeva gora above Zreče located in NE Slovenia occupies an exceptionally significant position among them. This imposing hilltop settlement was probably inhabited from the very beginning of the Bronze Age until the end of the Late Bronze Age, and therefore clearly stands out among other, more short-lived settlements in the region. Such prolonged continuity of Brinjeva gora is likely to be connected with the fact that the site lies in the south-western fringes of the Pohorje Massif, the area rich in ore deposits (TERŽAN 1983; TERŽAN 1990, pp. 36 ff., pp. 339 ff.; TERŽAN 1999, p. 134). Unfortunately, the site has been published only partially and therefore lacks any data regarding the spatial extent of settlement occupation, building plans or potential defensive structures dating to the Middle Bronze and the beginning of the Late Bronze Age (PAHIČ 1980; OMAN 1980; PAHIČ 1981; PAHIČ 1985; OMAHEN *et alii* 2019 and the references therein). Furthermore, the hilltop sites of Žlebič in the Dolenjska region and Strjanci in Slovenske gorice, as well as lowland settlement of Oloris

near Dolnji Lakoš were also marked on the aforementioned map (Fig. 1: 19, 54, 61; GABROVEC 1983, karta 2, p. 831; see also PUŠ 1988/1989; ŠINKOVEC 1995, pp. 106–107, t. 30: 210; PAHIČ 1975, p. 51; HORVAT-ŠAVEL 1988/1989).

In the late Middle Bronze Age, influences from Eastern Austria, Western Transdanubia, as well as from Posavina and Podravina regions were crucial for the area of central and eastern Slovenia, where two different phenomena could be detected – Bronze Age Tumulus Culture and Virovitica cultural group. South-western area of the country was defined as belonging to the area of the Castellieri culture (DULAR 1999, p. 85; TERŽAN 2013, pp. 845–846, 857; MIHOVIČ 2013, fig. 46.1). Recent research revealed that the impact of the Virovitica group, characteristic for Posavina and Podravina regions (VINSKI-GASPARINI 1973, pp. 57 ff.; TERŽAN 1995, pp. 324 ff.; DULAR 2002), was present already from the late 16<sup>th</sup>/beginning of the 15<sup>th</sup> century BC onwards (e.g., TERŽAN 2010, p. 160; TERŽAN 2013, pp. 845–846; TERŽAN, ČREŠNAR 2014a, p. 88; ŠKVOR JERNEJČIČ 2019; ŠKVOR JERNEJČIČ 2020, p. 450). Moreover, contacts between the prehistoric communities living in the south-eastern Alpine region and population from the territory of the Northern Carpathian Basin, most of all from the area of the Piliny culture, appear to be crucial for the changes occurring in the later part of the Middle Bronze Age (Br B2/C1) (ŠKVOR JERNEJČIČ 2020; ŠKVOR JERNEJČIČ 2021). In this very period the earliest cremations graves appeared throughout the area of consideration. It follows hence, that during the Middle Bronze Age archaeological picture of present-day territory of Slovenia was quite heterogeneous.

### **The settlements at Oloris near Dolnji Lakoš and Ptuj**

A decade ago, the only known and systematically excavated and published Middle Bronze Age settlement was the lowland settlement Oloris near Dolnji Lakoš in the Prekmurje region (Fig. 1: 61; DULAR, ŠAVEL, TECCO HVALA 2002). This lowland settlement was encircled by a stream. It is not clear whether a defensive ditch has been dug deliberately or only the natural bed of the stream was used to additionally fortify or delimit the settlement with a palisade. The interior of the settlement was most densely occupied in the very centre, where at two points the elevation was the highest (TERŽAN 2001, p. 128, Abb. 3; DULAR, ŠAVEL, TECCO HVALA 2002, Beil. 1). Deep arable ploughing unfortunately destroyed most of the uppermost settlement layers (DULAR, ŠAVEL, TECCO HVALA 2002, p. 43; see also TERŽAN 2010, p. 158). It is precisely because of ploughing that the occupation surfaces or pavements have not been preserved, therefore the archaeological excavations revealed practically no insight into the stratigraphic sequence of the settlement. Only individual storage/refuse pits, ovens, hearths, wooden well, remains of wattle and daub walls and postholes for the wooden beams of the building structures have been uncovered. In general, no finds were discovered in the postholes, hence it is hard to place them precisely in the specific time period. Thus, it is not entirely clear which postholes, and consequently which houses, were in use at the same time. It follows that we can only approximately estimate that several houses were inhabited simultaneously. Also as regards the appearance of the dwellings, the building density or spatial extent of settlement occupation at the Oloris near Dolnji Lakoš site, reliable archaeological traces remain scarce.

Notwithstanding, archaeological excavations at Oloris near Dolnji Lakoš revealed the building plans of separate houses, their dimensions and rectangular size. The houses were constructed with wooden beams supporting the roof construction, while walls were made of wattle and daub (Fig. 3). Building plans were reconstructed according to posthole line orientations and distinct concentrations of house daub. The hypothetical settlement plan made by J. Dular revealed that the houses were oriented NE-SW direction. They were arranged in small groups around a courtyard area with additional storage pits and ovens (DULAR 2002, Beil. 5). Fireplaces were mainly located inside the buildings. It seems that the site of Oloris near Dolnji Lakoš represents a village settlement with individual farms or households, within the complex of which several other dwelling structures, storage/refuse pits and fireplaces were located several other dwelling structures, storage/refuse pits and fireplaces (TERŽAN 2001, p. 128). A similar settlement organisation can be observed also at other contemporary settlements in the region, as will be shown below.

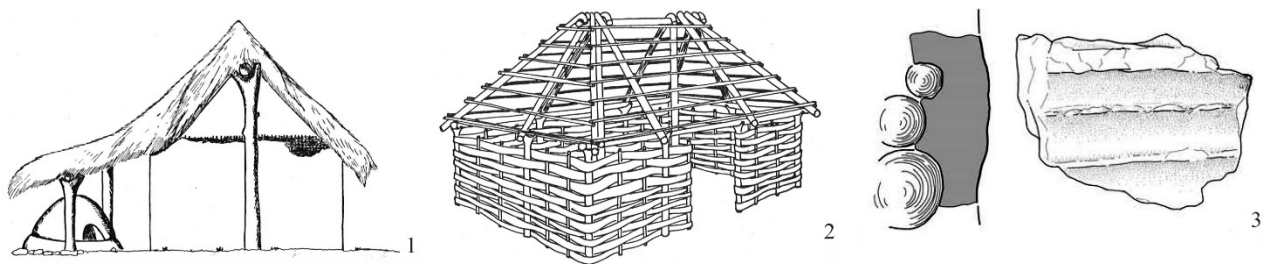


Fig. 3. Oloris near Dolnji Lakoš: reconstructions of buildings with load-bearing wooden beams and a fragment of a house wall plaster from the settlement (after ŠAVEL 1986, p. 33; DULAR, ŠAVEL, TECCO HVALA 2002, Abb. 25).

The most notable problem in connection with the settlement at Oloris near Dolnji Lakoš is the fact that there is not a single radiocarbon date available from this site. Chronology of the site is based primarily on typological and chronological analyses of ceramics, that is, on the dating of individual ceramic types according to their analogies in

neighbouring regions. There are only a few features at the site, such as storage/refuse pits and ovens, which offer insight into some closed archaeological contexts, but even these should not be *per se* equated with only one stratigraphic unit. According to the analysis of the archaeological material, beginning of the settlement has been dated to the end of the Middle Bronze Age, to the late MD III phase according to B. Hänsel or to the Br C1 phase (DULAR 2002, p. 173). However, some vessel types and their decoration as well as the rare bronze finds suggest that the beginning of the settlement should be dated somewhat earlier, to the Br B2/C1 phase (TERŽAN 1995, p. 327; TERŽAN 1999, p. 132; TERŽAN 2010; for the discussion see also DULAR 2011). Most of the ceramic material was dated by J. Dular to the Pre-Čaka and Čaka/Blučina-Kopčany and Baierdorf-Velatice horizons, i.e., to the Br D and Br D – Ha A1 phases, while afterwards the settlement was not inhabited anymore (DULAR 2002, p. 173). In the light of new research on the Middle and Late Bronze Age from the last decade, the settlement at Oloris near Dolnji Lakoš was thus inhabited during the entire Oloris – Podsmreka horizon, which stretches over three centuries from the second half of the 16th/first half of the 15<sup>th</sup> century BC until the end of the 13<sup>th</sup>/beginning of the 12<sup>th</sup> century BC (Fig. 2; ČREŠNAR, TERŽAN 2014, pp. 677–689).

Even though this is a relatively prolonged period, separate settlement phases at the site cannot be reliably discerned, due to the aforementioned lack of stratigraphy and absolute dates. As already mentioned, knowledge on settlements in the region and wider surroundings was meagre and consequently the scarcity of comparative material prevented archaeologists to date the closed contexts more accurately into separate phases. Only recently has the number of settlements from the Oloris – Podsmreka horizon increased to such an extent (Fig. 1) that, on the basis of typological and chronological analyses of ceramics and new radiocarbon dating results from secure closed contexts, we are gradually able to define individual vessel types and their characteristic decoration within particular phases of the late Middle Bronze Age and the beginning of the Late Bronze Age (e.g., ŠKVOR JERNEJČIČ 2019; ŠKVOR JERNEJČIČ 2020, pp. 451–457, figs. 2–7).

Typological and chronological analysis of the material from the Oloris near Dolnji Lakoš site, conducted by J. Dular, compared the ceramic forms and their decoration with the settlement ceramics from Rabelčja vas in Ptuj (STRMČNIK-GULIČ 1988/1989; DULAR 2002, pp. 163–174). The author mainly concentrated on a comparative analysis of the ceramic material, while leaving aside the discussion on similar settlement types or analogies for settlement remains and structures (DULAR 2002, pp. 168–170, Abb. 19–20). The archaeological excavations at Rabelčja vas revealed Middle and Late Bronze Age settlement with relatively large one- or two-roomed rectangular houses, of which only several postholes and remains of wattle and daub walls survived. Buildings with wooden beam construction were oriented NE and NW. Different storage pits and ovens were also discovered (DULAR 1987, fig. 27; STRMČNIK-GULIČ 1988/1989, pp. 148–149, Beil. 1). Furthermore, traces of Middle and Late Bronze Age settlement at Ptuj were discovered also at Policijska postaja on Osojnikova cesta (HORVAT, DOLENC VIČIČ 2010, p. 55, fig. 41). Interestingly, the hilltop area at Ptujski grad (Castle Hill) was also inhabited at that time (KOROŠEC 1951; DULAR 2013, pp. 73–75, 130, 136–177).<sup>4</sup>

## NEW RESEARCH ON THE MIDDLE AND LATE BRONZE AGE SETTLEMENTS

The knowledge of the settlement sites changed completely in the last two decades, when highway construction works revealed and caused the excavation of numerous lowland settlements (Fig. 1). Most of the newly discovered sites are lowland settlements what is not surprising since the archaeological investigation during highway construction works was limited mainly to lowland areas. The newly discovered sites in Gorenjska region are certainly a surprise – in addition to sites at Trata near Škofja Loka and Medvode-Svetje presented here, settlements at Kamna Gorica, Šmarna gora, Šmartno and Vodice were also discovered and excavated in recent years (Fig. 1; TURK, SVETLIČIČ 2014; MURGELJ, NADBATH 2014; PETERLE UDOVIČ 2007; LEGHISSA 2013). Prior to these new discoveries, very few Bronze Age sites were known from the Gorenjska region (e.g., DULAR 1999; TERŽAN 1999). New are also the hilltop settlement sites, set on the edges of the Ljubljansko Barje marshland – Tičnica at Vrhnika and Žabji grad (Fig. 1) (GASPARI, MASARYK 2009; KLASINC *et alii* 2007) as well as the less evidently raised settlements at Bevke, Jezero, Iška Loka and Ig (ČREŠNAR 2014; ŽORŽ 2014; VELUŠČEK 2005; GRAHEK 2017; DRAKSLER 2014). It should be mentioned that at Ljubljansko Barje a few pile-dwelling settlements were obviously inhabited also during the Middle Bronze Age (Fig. 1) (e.g., VELUŠČEK, TOŠKAN, ČUFAR 2011, pp. 63–65).

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<sup>4</sup> Among the oldest finds from Ptujski grad J. Dular identified two bowls, which he placed to the Br C2 and Br D phases (DULAR 2013, p. 73, t. 13: 1; 16: 9; see also t. 16: 4). Here we should draw attention also to a bowl with oblique grooves (DULAR 2013, t. 4: 1). An urn with similar decoration is known from the cemetery at Dvorišče SAZU in Ljubljana (ŠKVOR JERNEJČIČ 2021, pp. 128–129, fig. 10) and comes from the grave, which can be dated to the Br D phase. A pot decorated with horizontal smooth rib from Ptujski grad can further be characterised as one of the oldest finds from the settlement (DULAR 2013, t. 5: 1) as it is very similar to vessels from Kamna Gorica. The hearth at Kamna Gorica, in which these vessels were excavated, has been radiocarbon dated to the 15<sup>th</sup> century BC (TURK, SVETLIČIČ 2014, figs. 21.6; 21.9; see also ŠKVOR JERNEJČIČ 2020, p. 453, fig. 4: 6–7).

Nevertheless, the majority of newly discovered sites due to highway construction project are located in Dolenjska and Štajerska regions, in SE and NE part of Slovenia (Fig. 1). In recent years, a good part of these sites has been published in the series *Arheologija na avtocestah Slovenije* available online, what offers us a completely new aspect on the Middle and Late Bronze Age settlements. A brief overview of settlement patterns in the NE part of Slovenia throughout the Middle and Late Bronze Age period, which included also the new results from highway archaeological research, was made recently by J. Dular (DULAR 2013, pp. 101–106). According to his maps of the Middle Bronze Age (Br B1 – Br B2/C1) and the Late Bronze Age (Br C2/D)<sup>5</sup> sites, it seems that settlement increased and became more concentrated in certain areas, such as for example at Ptuj, Zgornja Hajdina in the vicinity of Ptuj or in the Prekmurje region, only at the beginning of the Late Bronze Age, or in the Br C2/D phase (DULAR 2013, Abb. 45–46). J. Dular concludes that the area of NE Slovenia in the Middle Bronze Age demonstrates a rather sparse occupation, as it is evident from the map where only three Middle Bronze Age settlements are marked. Furthermore, B. Kavur also listed only four new Middle Bronze Age sites, which have been investigated as a result of the motorway construction project (KAVUR 2018, p. 30).<sup>6</sup>

New monographic publications of the Bronze Age settlements provide a more precise understanding about the occupation period of individual settlements. A systematic overview and synthesis of all the new results is certainly a *desideratum* of the Slovenian archaeological science. Such undertaking would however surpass the scope of present article, hence our aim here is rather to merely outline the topic. According to new findings, the beginning of settlements, which were dated by J. Dular more or less to the beginning of the Late Bronze Age period (DULAR 2013, Abb. 46), should be dated already in the Middle Bronze Age (Br B2/C1) period or to the beginning of the Oloris – Podsmreka horizon, if not even earlier. In addition to the settlement at Oloris near Dolnji Lakoš itself, which has already been discussed, the settlements at Podsmreka near Višnja Gora, Šiman near Gotovlje, Žutreki, Malečnik, Gomile near Lenart, Sodolek, Nedelica near Turnišče, Gornje njive at Dolga vas, and Pince near Lendava show signs of occupation already in the Br B2/C1 phase (MURGELJ 2013; TOMAŽIČ, OLIČ 2009; LUBŠINA-TUŠEK 2003; KRAMBERGER 2021; ŠAVEL, KERMAN 2008; KAVUR 2018; ŠAVEL, SANKOVIČ 2013; ŠAVEL, KERMAN 2008; KERMAN 2018; see also TERŽAN 2010). Despite these numerous newly excavated settlements, which enabled us to obtain series of new radiocarbon dating results from reliable closed archaeological contexts, the fact that stratigraphic sequence of the settlements has been as a rule destroyed by ploughing remains a major problem. Usually only postholes, storage/refuse pits dug into the geological bedrock, hearths and ovens survive. Accordingly, it is hard to comprehend which buildings were occupied simultaneously, nor it is possible to always identify the separate settlement phases. Archaeological analyses of the settlement remains are therefore oriented mainly towards the ceramic repertoire and its typological or chronological definition.

### ***The settlements at Nedelica near Turnišče and Pince near Lendava***

The problem of understanding settlement occupation or its extent can most eloquently be explained comparing two particular settlements located in the Prekmurje region, Nedelica near Turnišče and Pince near Lendava (Figs. 1, 4, 6; ŠAVEL, SANKOVIČ 2013; ŠAVEL, SANKOVIČ 2014; KERMAN 2014; KERMAN 2018). Both lowland settlements were inhabited during the Middle and Late Bronze Age, from the Br B2/C1 phase up to the Br D/Ha A1 phase (ŠAVEL, SANKOVIČ 2013, p. 45; KERMAN 2018, pp. 84, 866). At Nedelica near Turnišče larger and smaller pits and postholes have been found. Three aboveground structures or huts could be identified according to the location of postholes (Fig. 4; ŠAVEL, SANKOVIČ 2013, fig. 26). Only in one of these postholes (stratigraphic unit = SU 208) connected with huts, fragment of a vessel was found (ŠAVEL, SANKOVIČ 2013, pp. 200, 201: Cat. no. 647, fig. 26), while all the other postholes were without finds. Therefore, it is difficult to determine the exact period of occupation of these huts or the extent of time when they were actually in use. Moreover, we also have no reliable information on the nature of relationship of these potential huts with all the other pits in the vicinity.

Samples for radiocarbon dating analysis were taken from three pits, located between hut 1 and hut 2 (Fig. 4). Among the oldest appears to be the layer SU 381 from the pit SU 344, which was dated to the 16<sup>th</sup> century BC and indicates that the settlement was already occupied in the Middle Bronze Age (ŠAVEL, SANKOVIČ 2014, pp. 84–85, fig. 4.6). Noteworthy is a pottery fragment excavated in the layer SU 381/pit SU 344, decorated with vertical and oblique incisions (ŠAVEL, SANKOVIČ 2013, p. 201: Cat. no. 636). Decoration of vertical and horizontal incisions or incised hatched triangles turned upside down is characteristic of the Bronze Age Tumulus Culture ceramics, dated between the 17<sup>th</sup> and 15<sup>th</sup> century BC and has been attested on several newly discovered Bronze Age settlements in Slovenia (e.g.,

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<sup>5</sup> It is not clear why, according to J. Dular, Br C2 represents the beginning of the Late Bronze Age.

<sup>6</sup> In addition to the settlements at Gomile near Lenart, Pod Kotom-sever near Krog and Pince near Lendava, the ceramics from the settlement Pod Kotom-cesta near Krog was also dated to the Middle Bronze Age (TUŠEK 2010, t. 1: 1–2; see also PAVLIN 2015, pp. 13, 20, 70–71: cat. no. 25, that dates these finds to the Early Bronze Age).



TOMAŽIČ 2009, p. 35; TERŽAN 2010; ŠAVEL, SANKOVIČ 2013, p. 40; KERMAN 2018, p. 82; KAVUR 2018, p. 38; see below; figs. 13; 22).

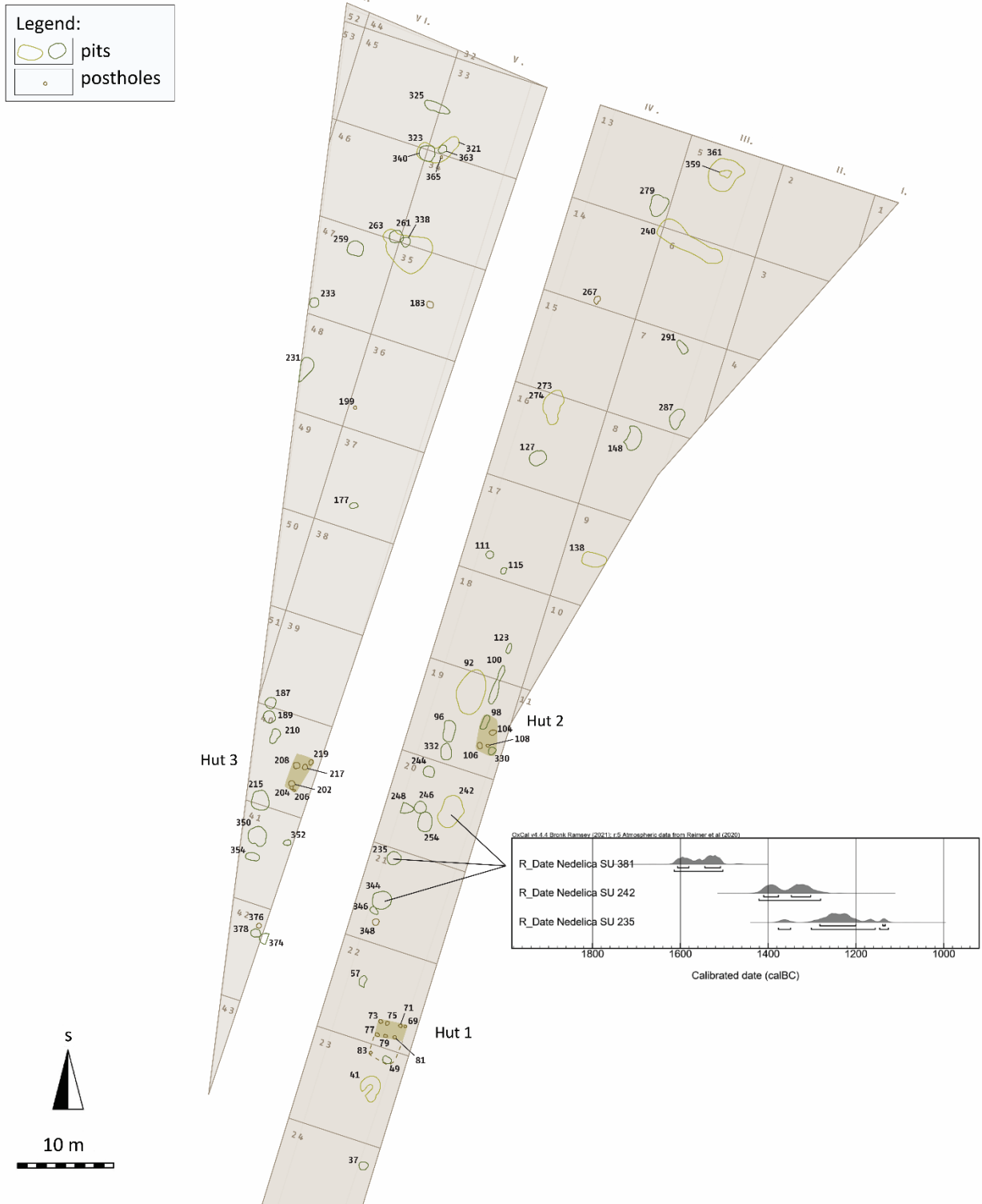


Fig. 4. Nedelica near Turnišče: ground plan of the Middle/Late Bronze Age settlement and temporal spans of radiocarbon dating results from the pits (modified after ŠAVEL, SANKOVIČ 2013, figs. 26; 56–58).

Such is the case of vessel example from the Brengova site, which is very similar in shape and incised decoration to the vessel from settlement at Šiman near Gotovlje (Fig. 5; JANEŽIČ, CIGLAR, ŽIŽEK 2021, pp. 62, 145: Cat. no.151; fig. 8; TOMAŽIČ 2009, pp. 16–17, 21, 23, 29, 31, 34–35, 49, 137: Cat. no.373; figs. 37: 373; 41: 373).<sup>7</sup> The vessel from the Brengova site

<sup>7</sup> In the publication (JANEŽIČ, CIGLAR, ŽIŽEK 2021, pp. 62, 145: Cat. no. 151; fig. 8) the vessel was published mistakenly as an urn from the cremation grave. Pers. comm. B. Kavur.

features a decoration with incised motives, among them also hatched triangles, which, however, are not turned upside down as on the majority of Middle Bronze Age vessel examples, but are placed upright. Such decoration of standing hatched triangles can further be found among the settlement ceramics from Brengova and Sodolek (JANEŽIČ, CIGLAR, ŽIŽEK 2021, pp. 133: Cat. no.79; 135: Cat. no.93; 141: Cat. no.129; 145: Cat. no.151; KAVUR 2018, pp. 173: Cat. no.133; 183: Cat. no.202; 213: Cat. no.385), as well as at settlements of Medvode-Svetje and Trata near Škofja Loka (see below; figs. 13; 22), or at the site Šiman near Gotovlje (TOMAŽIČ, OLIČ 2009, p. 105: Cat. no. 235).

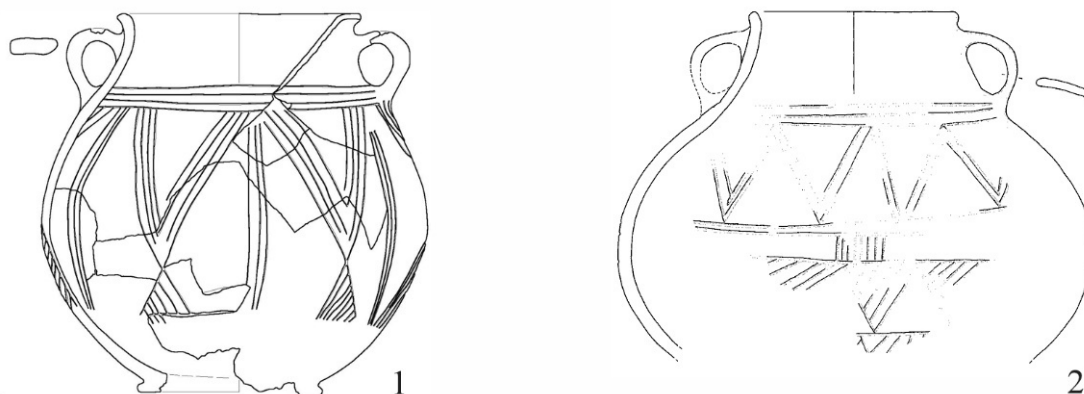


Fig. 5. 1. Decorated ceramic vessels: 1 – Brengova (after JANEŽIČ, CIGLAR, ŽIŽEK 2021, p. 145: Cat. No. 151); 2 – Šiman near Gotovlje (after TOMAŽIČ, OLIČ 2009, Cat. No. 137: 373). Scale 1:4.

Returning to the discussion about the site Nedelica near Turnišče, besides the aforementioned pit SU 344 and its layer SU 381, which has been radiocarbon dated to the 16<sup>th</sup> century BC, there are two other radiocarbon dates from two nearby pits, pit SU 242 and pit SU 235 (Fig. 4). These are younger and belong to the 14<sup>th</sup> and 13<sup>th</sup> century BC (ŠAVEL, SANKOVIČ 2014, pp. 84–85, figs. 4.7–4.8). Of particular interest is the radiocarbon dating result from the pit SU 242, spanning between 1422–1282 cal BC ( $2\sigma$  - 95.4 %), that is, covering the period between the late 15<sup>th</sup> and early 13<sup>th</sup> century BC. Despite the abundance of new settlement finds from the end of the Middle Bronze Age in central and eastern Slovenia, it remains difficult to differentiate the period of 14<sup>th</sup> century BC and define which vessel types were specific for this very period (ŠKVOR JERNEJČIČ 2020, pp. 456–457). Specially attention deserve two rather small fragments, decorated with oblique grooves, which were discovered in the pit SU 242 at the Nedelica near Turnišče site (Fig.6: 31–32; ŠAVEL, SANKOVIČ 2014, fig. 4.4: 31–32). Similar decoration is attested for example also on the cup examples from Ivančna Gorica and Rabelčja vas in Ptuj (PLESTENJAK *et alii* 2013, t. 5: 6; STRMČNIK-GULIČ 1988/1989, t. 7: 2). Up to now, such type of decoration was generally associated with pottery, characteristic of the Baiern-Velatices circle (Ha A) or even with later phases (e.g., STRMČNIK-GULIČ 1988/1989, p. 159; DULAR 2002, p. 174). However, the new radiocarbon dating result from Nedelica near Turnišče, further vessel fragments with oblique grooves from the Pince near Lendava site (KERMAN 2014, fig. 1.14: 21–23), as well as thorough ceramic analysis of the material from the Dvorišče SAZU cemetery in Ljubljana (ŠKVOR JERNEJČIČ 2021, p. 128, figs. 9–10), all indicate that vessels decorated with oblique grooves were in use as early as the Br D phase if not even earlier. It seems that appearance of the ceramics with the same decoration from the territory of the NE Italy is slightly later dating to the end of BR 2 phase (e.g., DALLA LONGA, TASCA 2018, pp. 381, 383).

In the same pit SU 242 at the Nedelica near Turnišče site also a vessel fragment decorated with knobs has been discovered, hence in the context that was radiocarbon dated to the 14<sup>th</sup> century BC (Fig. 6: 25; ŠAVEL, SANKOVIČ 2013, pp. 40–41, 188, 189: Cat. no. 578; fig. 32: G578; ŠAVEL, SANKOVIČ 2014, figs. 4.4; 4.6). Decoration with knobs (*decorazione a bugnette applicate*) is also known from numerous Middle/Late Bronze Age sites from Northern Italy, as for example from Pramare di Sesto al Reghena and Castions di Strada (URBAN 1993, pp. 173, 176–177, figs. 89: 711–712; 91; BORGNA *et alii* 2018, fig. 9: 14–15), where they are dated to the period of transition between BM3 and BR1 phase, what in turn can be correlated with the transition between Br C2 and Br D phases or the so-called *middle/late* Oloris – Podsmreka horizon (Fig. 2). Further examples of such knob decoration are known at sites Ridivischia, Muzzana Bonifica, Piancada Idrovora Volpares (TASCA 1999, p. 45, Tav. XII: 10; VICENZUTTO 2015, fig. 30; TASCA 2019, p. 27; see also HELLMUTH-KRAMBERGER 2017, pp. 262–266 and the references *therein*). It appears also on the settlement ceramics dating to the Oloris – Podsmreka horizon, attested at sites of Brengova, Pince near Lendava, Podsmreka near Višnja Gora and Mačkovač – Crišnjevcji (JANEŽIČ, CIGLAR, ŽIŽEK 2021, pp. 129: Cat. no. 51; 139: 115; KERMAN 2018, pp. 549: Cat. no. 681; 621: Cat. no. 1004; MURGELJ 2013, p. 255: Cat. no. 955; KARAVANIČ, MIHALJEVIČ, KALAFATIĆ 2009, p. 53, t. 3: 4). Moreover, a similar decoration was found in the grave 14 from Sávolý-Babócsa (HONTI 1996, pp. 238, 241, Abb. 4: 6) and in the grave from Vörs–Battyáni (HONTI 1993, fig. 4: 7), as well as from the settlement at Gelsesziget in Hungary (HORVÁTH 1994, fig. 5: 3).



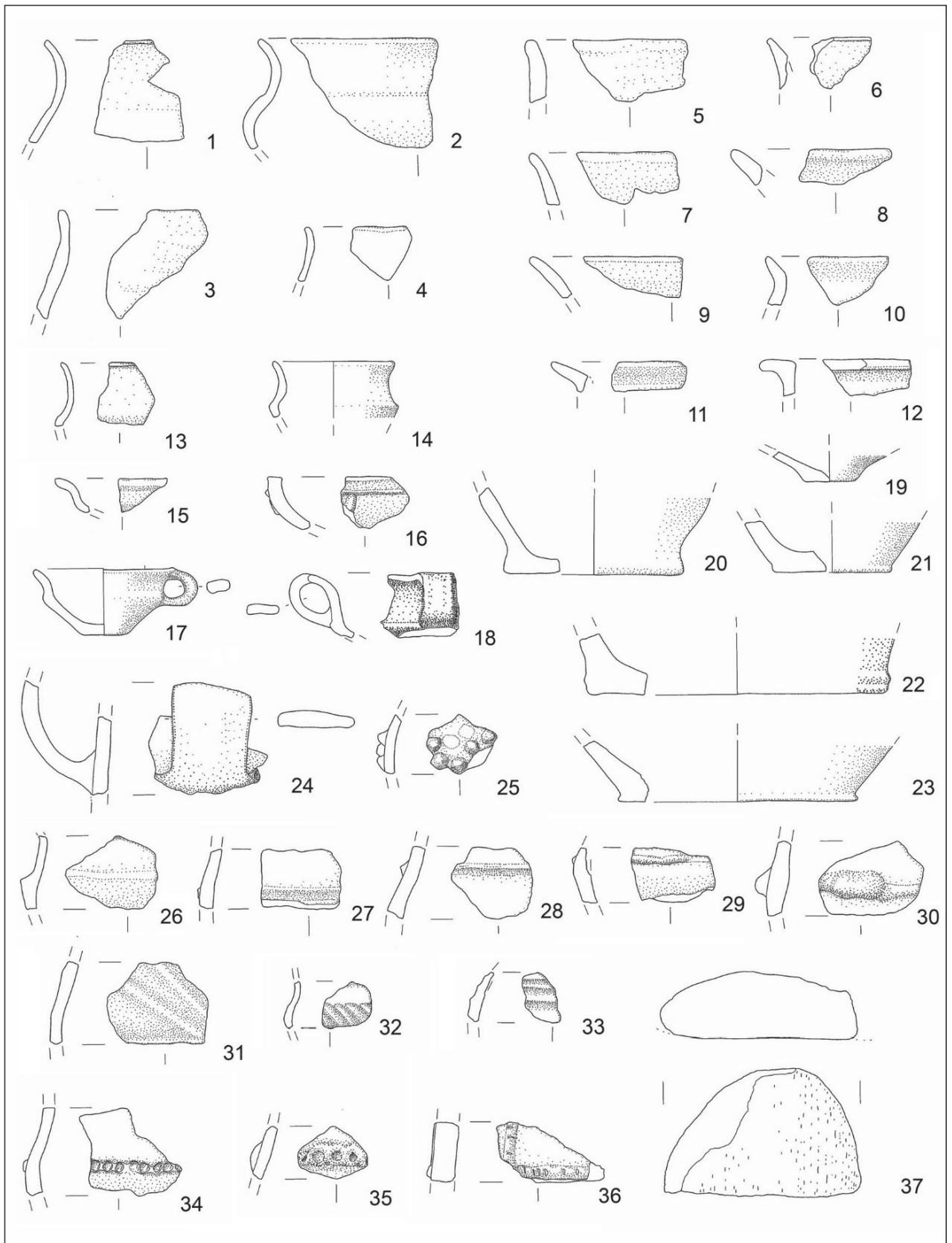


Fig. 6. Nedelica near Turnišče: selected finds from the pit SU 242; for the radiocarbon date of this context see Fig. 4 (after ŠAVEL, SANKOVIČ 2014, fig. 4.4). Scale 1:4. 1-36 ceramics; 37 stone.

Archaeological excavations at the site Pince near Lendava in the Prekmurje region, in the far NE part of Slovenia, have broadened our perspective on the Middle and Late Bronze Age settlement (KERMAN 2018). As many as twenty-eight houses, two “granaries”, hearths, ovens, concentrations of pottery fragments and various pits dating to the Middle and Late Bronze Age were discovered. The houses that varied in shape and dimension – the biggest house measured 11.2 x 5.6 m – were constructed with wooden beams, of which only postholes survived, while the walls were made with wattle and daub. Houses were arranged around a central space where, interestingly, only hearths and fireplaces were discovered. A series of radiocarbon dating results and thorough analysis of finds have shown that after the Early Bronze Age period occupation, the settlement was inhabited again from the end of Br B2/C1 phase until Ha A1 phase (KERMAN 2014, pp. 44–57, fig. 1.34; KERMAN 2018, pp. 64–89). Due to the unclear stratigraphic sequence at the settlement, the building plans have been reconstructed according to the locations of the postholes. Therefore, the characterisation of separate settlement phases at the site occupied over a period of more than four centuries, appears to be difficult. Questions regarding the simultaneous or divergent occupancy of buildings, the potential prolonged use of certain buildings, as well as the modes and periods of their reconstruction, rebuilding and abandonment also remain more or less unanswered (KERMAN 2018, figs. 30a–30b).

## **TWO CASE STUDIES: SETTLEMENTS AT MEDVODE-SVETJE AND TRATA NEAR ŠKOFJA LOKA IN GORENJSKA REGION**

The best insights into the Bronze Age settlement characteristics are at present offered by two newly discovered sites at Medvode-Svetje and Trata near Škofja Loka, both located in the Gorenjska region (Fig. 1). These findings are astonishing, since up to now we had practically no information regarding the Bronze Age settlement in the Gorenjska region (e.g., DULAR 1999; TERŽAN 1999). Moreover, the site of Medvode-Svetje revealed individual settlement structures – huts, hearts and pits, which can be reliably dated in three separate settlement phases dating from the late Middle Bronze Age (Br B2/C1) to the early Urnfield period (Ha A1). Post-excavation analysis of the site Trata near Škofja Loka is still in progress, but the preliminary results rise expectations, that it represents one of the most important Bronze Age lowland settlements in the region.

### ***The settlement at Medvode-Svetje***

The site of Medvode-Svetje is located in the Gorenjska region, in the north-western part of Slovenia, only a kilometre away from the confluence of the Sora and Sava rivers (Fig. 1). It was first detected during archaeological field survey in May 2007. Later in the same year archaeological excavation was conducted, which covered an area of approximately 4300 m<sup>2</sup> (Fig. 7: Area 1) (KLASINC, LEGHISSA, BREZIGAR 2007). The excavation revealed a settlement from the Middle and Late Bronze Age period. Three separate phases have been identified in this part of the site denominated Area 1, covering the period between Br B2/C1 and Ha A phase (LEGHISSA 2011; LEGHISSA 2014). Several postholes were discovered, some of which outline the plans of rectangular huts (Fig. 8). Among the finds there is a large amount of fragmented ceramic vessels as well as numerous other objects.

Since 2010, further excavations have taken place also west and south of the area researched in 2007 (Fig. 7: Areas 2–4).<sup>8</sup> In the westernmost part of the site, archaeological excavations were carried out in several campaigns during the last ten years (Fig. 7: Area 3). Only few of these campaigns resulted in negative results and did not confirm Bronze Age settlement occupation (Fig. 7: yellow), while the majority of them uncovered numerous Bronze Age settlements remains. In the Area 2, most of the settlement remains have been destroyed by later interventions and only remains from the Roman period have been preserved (Fig. 7: blue).

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<sup>8</sup> The review of excavation documentation and material has not yet been completed. The 2007 excavations were studied as part of the Diploma thesis by one of the authors (LEGHISSA 2011). The results of the study are planned to be published in a monograph, which will include also other excavation campaigns. Here we present only preliminary results of the excavated areas at the site, two of which have already been partly published (LEGHISSA 2014; GRUDEN, BERDNIK, KLASINC 2018). The results of other areas are presented until now only in unpublished field reports of the excavations (ŽORŽ, LEGHISSA 2011; TURK, BAJC 2014; LAVRIČ, VERŠNIK 2014; TURK, RUPNIK 2014; JOSIPOVIČ, BREZIGAR, RUPNIK 2015; JOSIPOVIČ, BREZIGAR, RUPNIK, PEČOVNIK 2015; KLASINC, HVALEC, KREN 2016; BERDNIK, KOLAR, KLASINC, HVALEC 2016; BERDNIK, KLASINC, GRUDEN 2016; BREZIGAR, RUPNIK 2016; KLASINC, ŠTAJDOHAR, BERDNIK 2017a; KLASINC, ŠTAJDOHAR, BERDNIK 2017b; BREZIGAR 2018; GRUDEN, BREZIGAR, JENDRAŠIČ 2018; LAVRIČ, ARH 2018; KLASINC 2019; BREZIGAR 2019a; BREZIGAR 2019b; BREZIGAR, RUPNIK 2019; ŠTAJDOHAR, KLASINC 2020; JENKO, KLASINC, ŠTAJDOHAR 2021; BREZIGAR 2021).



Fig. 7. Medvode-Svetje: excavated Areas 1-4. Map: E. Leghissa.

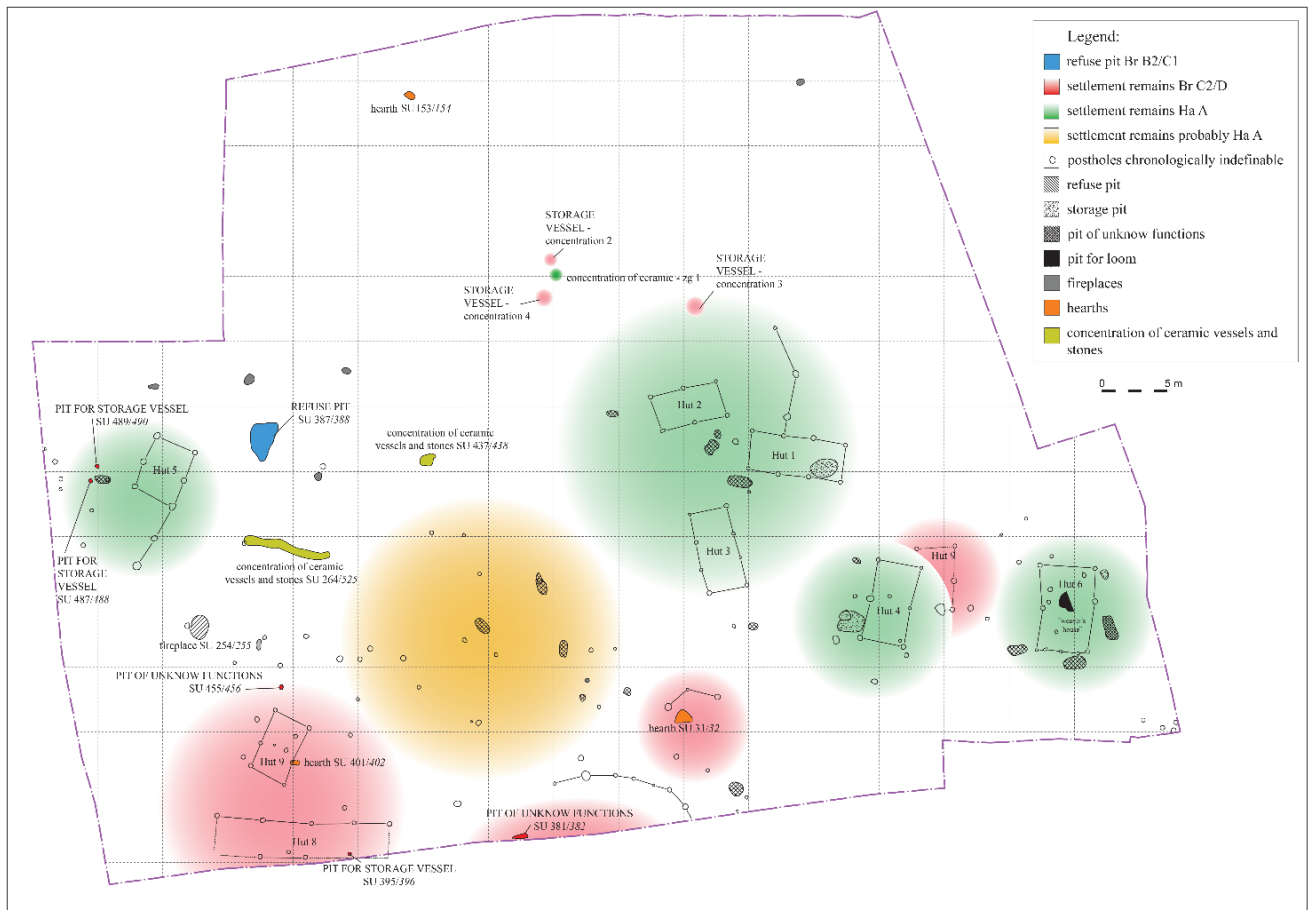


Fig. 8. Medvode-Svetje: ground plan of the Area 1 (after LEGHISSA 2011, priloga 31). Map: E. Leghissa.



Among the most interesting discoveries at Medvode-Svetje are the remains of a linear structure, oriented in the NS direction and made of stones of different sizes, which was documented in several parts of the Area 3 (Figs. 7; 9). Most likely, it represents the remains of a prehistoric path/road or a kind of embankment within the settlement and can be dated to the younger phase of the settlement (Ha A period). Prehistoric paths were also discovered at Bronze Age settlement sites Vodice and Kamna Gorica, as well as at Rabelčja vas near Ptuj (LEGHISSA 2013; pers. comm. P. Turk; DULAR 1987, p. 44).



Fig. 9. Medvode-Svetje: sections of the stone linear structure, probably Late Bronze Age path located within the settlement, excavated in the Area 3. View towards north. Photo: B. Brezigar; figure: E. Leghissa (after JOSIPOVIČ, BREZIGAR, RUPNIK, PEČOVNIK 2015, sl. 21).



The excavations (Fig. 7: Areas 2–4) have confirmed various settlement remains, such as postholes, pits, hearths, concentrations of broken ceramic vessels, stones and other artefacts, which in cases clearly indicate the remains of huts, fences and other structures. The most numerous finds are fragments of prehistoric ceramic vessels, on which more will be said below.

The best preserved settlement remains are located in the Area 1, excavated in 2007, which represents the northern edge of the Bronze Age settlement. These remains include fireplaces, hearths, refuse and storage pits, pits of unknown function and numerous postholes. Some of the postholes clearly outline the ground plan of nine simple, rectangular huts, measuring roughly 2-3 m in width and 5-7 m in length (Fig. 8). There were probably other huts, as is indicated by the numerous postholes in the central part of the excavated area, but a reliable ground plan of the latter could not be discerned. Many postholes were lined with stones on their sides and were clearly used as wedges for the wooden poles (Fig. 10). In the immediate vicinity of the huts several oval or irregularly shaped pits, the particular function of which remains unknown, were excavated. Their size varied from 0.3 to 2.8 m. The pits were located inside the huts only in two cases (Fig. 8). Occasionally, the pits could be extremely small and evidently served only to hold a larger storage vessel.

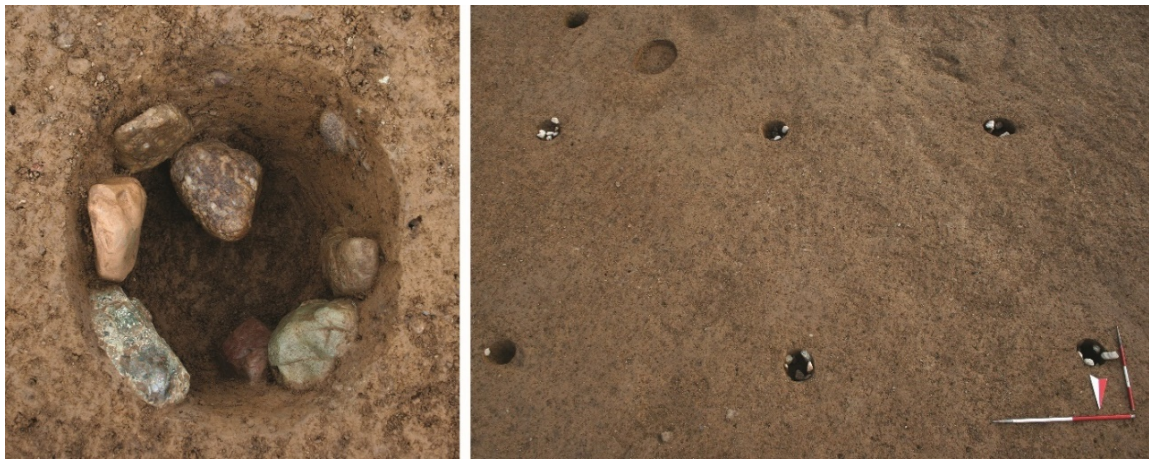


Fig. 10. Medvode-Svetje: posthole SU 77/78 (left) and ground plan of Hut 2 (right). View towards south. Photo: M. Lukić (after LEGHISSA 2011, p. 14; LEGHISSA 2014, fig. 19.8).

According to finds, horizontal and vertical stratigraphy, radiocarbon dates and also typological classification of the individual settlement remains, especially the postholes, three phases of Bronze Age occupation were identified in the Area 1. Among the oldest remains is a refuse pit, located in the W part of the treated area (Fig. 8). The irregular pit measured 2.8 m in length and was filled with silty clay and stones, charcoal fragments as well as, most importantly, numerous fragments of various ceramic vessels. A total of nearly eight hundred ceramic fragments were found, belonging to at least twenty-five different vessels. A sample of charcoal from this pit was sent for radiocarbon dating analysis. The calibrated date between 1631 and 1496 cal BC ( $2\sigma$  - 95.4 %) indicates, that the pit was in use in the Br B2/C1 phase (Fig. 11) (LEGHISSA 2014, fig. 19.10).

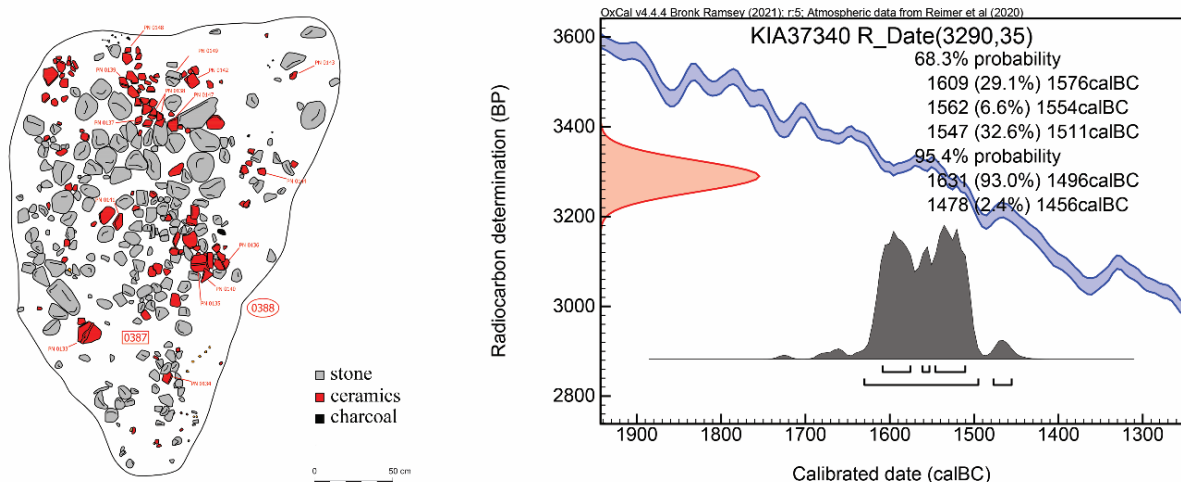


Fig. 11. Medvode-Svetje: ground plan of the refuse pit SU 387/388 (left) and the result of radiocarbon analysis of the charcoal sample from the same pit (right). Figure: E. Leghissa (after LEGHISSA 2011, priloga 17; LEGHISSA 2014, p. 342, Fig. 19.10).

Finds from this refuse pit include jars, cups, and bowls (Fig. 12).

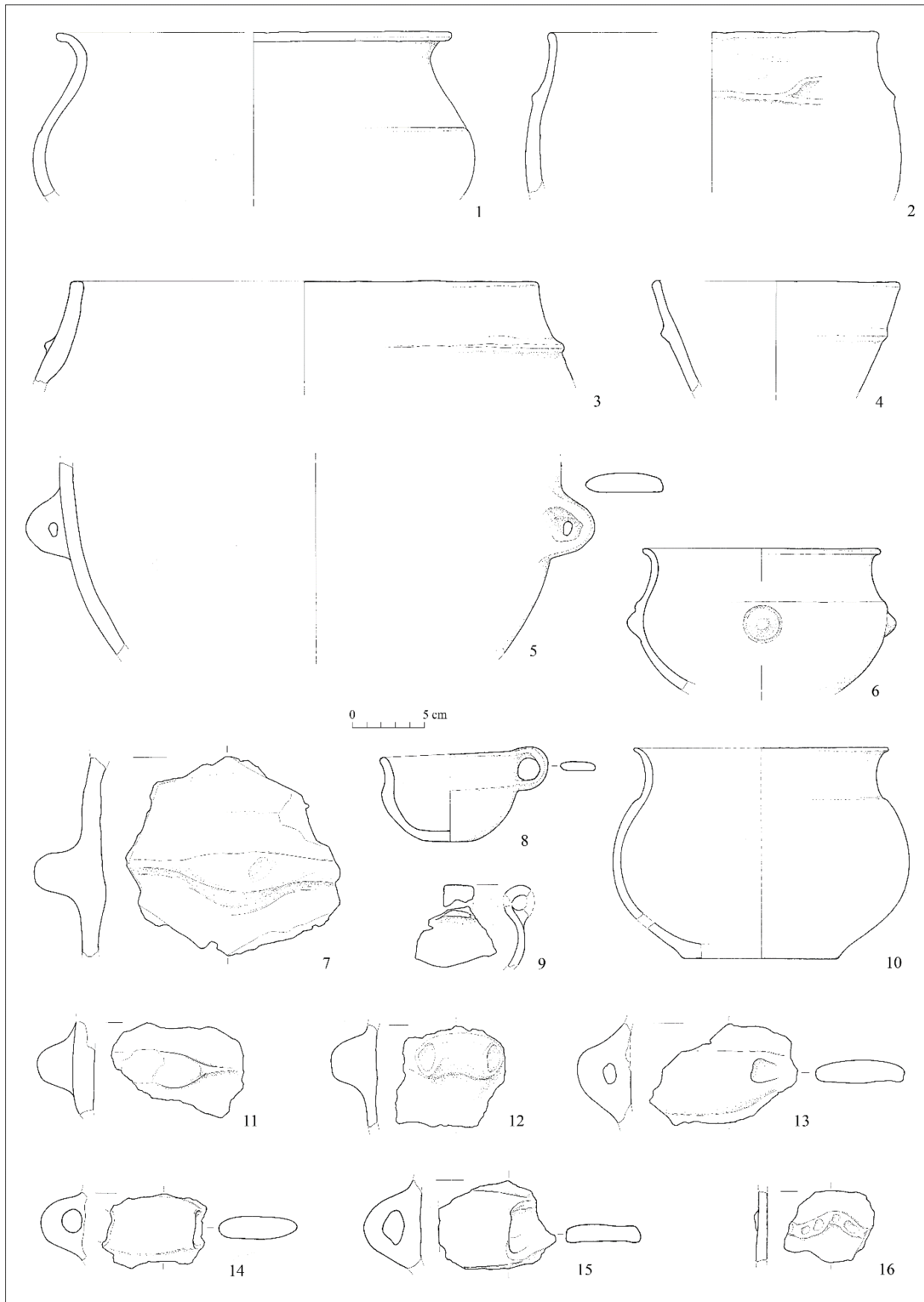


Fig. 12. Medvode-Svetlje: selection of ceramic finds from the refuse pit SU 387/388 discovered in the Area 1; for the radiocarbon date of this context see Fig. 11. Scale 1:4. Drawings: N. Grum; figure: E. Leghissa (after LEGHISSA 2011, t. 15; 16: 1, 6; 17: 1–4; 18: 1–6; 19: 12).



Tunnel and tongue-shaped lugs, sometimes decorated with a fingerprint impression in the centre, are very common (Fig. 12: 7, 11–15). Some of the ceramic vessels are decorated with ribs, while among the most interesting decorations there are knobs, encircled with a groove (Fig. 12: 6). Vessels decorated with knobs encircled with a groove represent a widespread phenomenon. In the Carpathian Basin, such decoration can be observed already in the period of transition from the Early to the Middle Bronze Age (TERŽAN 2010, p. 157, and the references therein). It is a very common feature on Middle Bronze Age vessels in Hungary, Slavonia, Moravia and Slovenia (MURGELJ 2013, pp. 37–39 and the references therein). In Austrian Styria, vessels decorated with knobs are characteristic of the Retznei-Freidorf horizon (i.e., Br B2/C phase) according to G. Tiefengraber (TIEFENGRABER 2007, p. 98; Abb. 15). This type of decoration is also known from sites in Istria, such as Monkodonja, and Northern Italy (HELLMUTH KRAMBERGER 2017, t. 19: 9; 26: 2, etc.; MURGELJ 2013, p. 39; URBAN 1993, p. 180, fig. 95). In Slovenia, this type of decoration is associated with the Oloris – Podsmreka horizon (TERŽAN, ČREŠNAR 2014b, pp. 681, 683–684), especially with its early phase (ŠKVOR JERNEJČIČ 2020, pp. 452–453; figs. 3: 4; 4: 2) and is frequently attested at sites from the Middle and the beginning of the Late Bronze Age (e.g., Oloris near Dolnji Lakoš, Pince near Lendava, Brinjeva gora, Podsmreka near Višnja Gora, Krka, Krška jama, Iška Loka, Kamna Gorica near Ljubljana, Trata near Škofja Loka) (Fig. 22; MURGELJ 2018, pp. 56–58; fig. 5 and the references therein). Interestingly, identical bowl decorated with knob encircled with a groove was recently found also at the site Malečnik near Maribor, in a pit SU 42 (KRAMBERGER 2021, p. 171: Cat. no. 73). In the same pit a vessel containing plant remains was also found. Radiocarbon dating analysis of plant remains showed that this very context should be dated to the 16<sup>th</sup> century BC (KRAMBERGER 2021, pp. 56–57; fig. 56).

No other settlement remains from this earliest phase have been identified in the Area 1 at the site Medvode-Svetje, but there are further similar pottery examples that indicate such an early occupation of the site. Besides the already mentioned vessels decorated with knobs, also vessels with incised triangular and other linear motifs are attested (Fig. 13). As already mentioned, this type of decoration is also typical for the period Br B2/C1 and Br C2 and is very common on the pottery of the Bronze Age Tumulus Culture (cf. above).



Fig. 13. Medvode-Svetje: vessel decorated with incised triangular and linear motifs from the Area 2. Scale 1:3. Drawing: P. Jendrašič; photo: B. Brezigar (after BREZIGAR 2018, sl. 14).

Settlement remains, which can be dated to the period Br C2/D, are attributed to the second phase of the site (LEGHISSA 2014, pp. 336–337). The findings that can be assigned without doubt to this period are located in the southern part of the excavation field (Fig. 8: Area 1). Among them there are two huts in the SW part (Hut 8 and Hut 9) and a smaller hut that was partially damaged by the subsequent construction of another hut. Other remains include a pit with completely preserved jug example (Fig. 14). To the same phase also belongs a hearth SU 31/32, from which a charcoal sample was taken for radiocarbon dating analysis. The result of the latter indicates a range between 1436 - 1266 cal BC ( $2\sigma$  - 95.4 %) (LEGHISSA 2014, p. 342, fig. 19.11) (Figs. 15–16).



Fig. 14. Medvode-Svetje: ceramic jug discovered in a pit (SU 381/382) in the Area 1. Photo: M. Lukić.



Fig. 15. Medvode-Svetje: hearth SU 31/32 in the Area 1. Photo: M. Lukić (after LEGHISSA 2014, Fig. 19.6).

The hearth fill contained several pieces of fired clay, mainly at the bottom of the pit, and several broken ceramic vessels. Of special interest is a jar with a curved neck and a slightly everted rim, decorated with applied horizontal and oblique ribs with fingerprint impressions, as well as two bowl fragments with strongly everted rims and carinated rim-to-wall transition on the inside (Fig. 16: 1a–1b, 3, 5). Such bowls were found for example also at the Oloris near Dolnji Lakoš site mentioned above (DULAR, ŠAVEL, TECCO HVALA 2002, pp. 153, 170; fig. 8: S10; t. 42: 1). They are similar to characteristic bowls of the Blučina-Kopčany phase in Moravia, which is placed in the period of transition from the Middle to the Late Bronze Age (e.g., ŘÍHOVSKÝ 1982, t. 28: 3, 4, 6–8; 45: 7, 9; 46: 5).

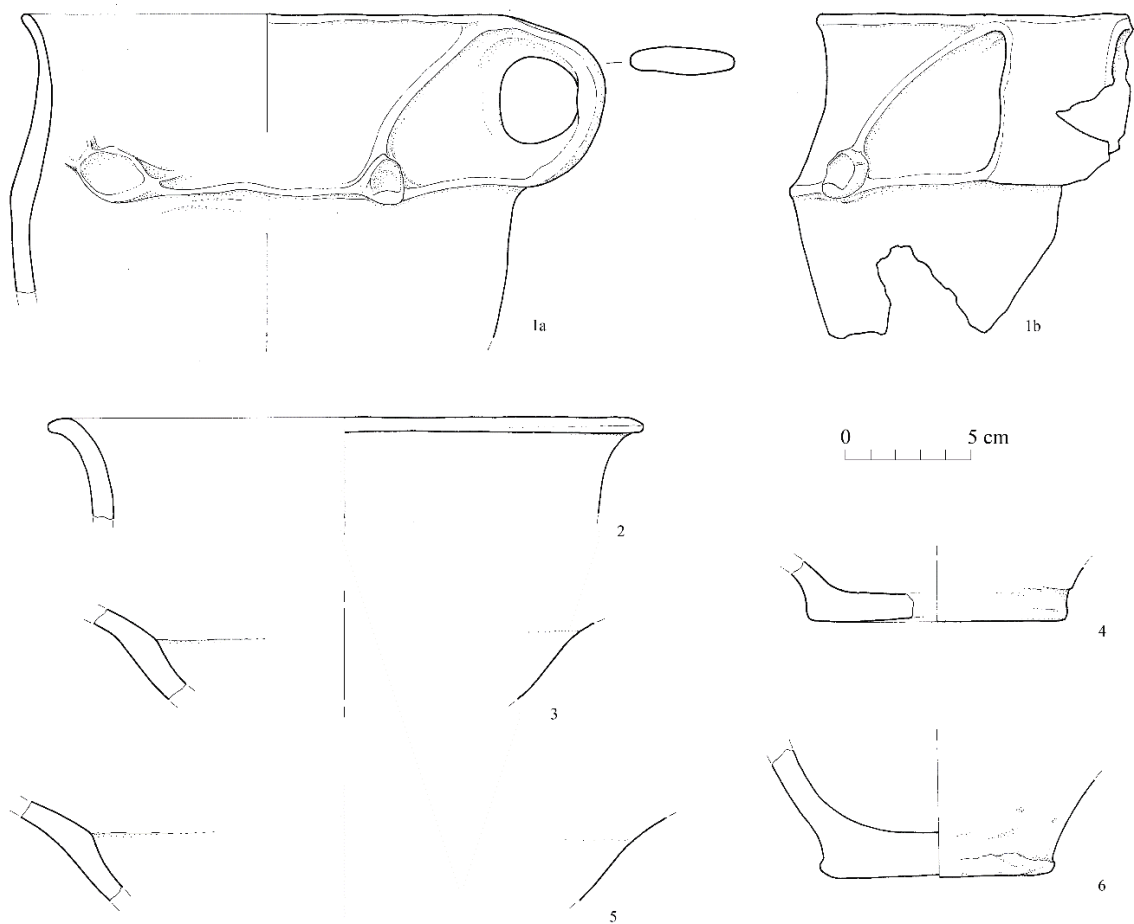


Fig. 16. Medvode-Svetje: selection of ceramic finds from the hearth SU 31/32 in the Area 1. Scale 1:3. Drawings: N. Grum; figure: E. Leghissa (after LEGHISSA 2011, t. 24).

In the Ha A period, the settlement at Medvode-Svetje in the Area 1 reached its greatest extent. Six of the identified huts could be assigned to this phase, based on the finds and stratigraphy (Fig. 8). Among them is Hut 6, which contained an irregularly shaped pit. The only examples of ceramic rings found in the settlement were in the immediate vicinity of this pit. The pit was accordingly interpreted as a pit for vertical loom and the ceramic rings in its immediate vicinity as loom weights (LEGHISSA 2011, pp. 197–199). Life in the settlement undoubtedly declined after the end of the Ha A period, as no finds or remains were discovered which would indicate further occupation of the area.

### **The settlement at Trata near Škofja Loka**

The Bronze Age settlement Trata near Škofja Loka lies on the plain of Sorško polje in the Gorenjska region, in the NW part of Slovenia, approximately 5,3 km upstream the river Sora from the site Medvode-Svetje (Fig. 1: 1–2). The site was identified mainly because of the two Iron Age tumuli located in the immediate vicinity. During a preliminary archaeological survey, which was conducted due to the expansion of the industrial zone in 2017, Bronze Age pottery fragments have been found that clearly indicated settlement site of an older age in this area. Archaeological excavations covering area of 18.329 m<sup>2</sup> have taken place from 2018 to 2020 (Figs. 17–18) (BREZIGAR, KLOKOČOVNIK 2018; BREZIGAR 2021).





Fig. 17. Trata near Škofja Loka: aerial view of the excavation area in 2020. View towards north. Photo: B. Brezigar.



Fig. 18. Trata near Škofja Loka: different areas excavated between 2018 and 2020. Map: E. Leghissa.

The settlement is located on a fluvial terrace, made in the past by the river Sora. Systematic archaeological research has revealed remains of a settlement, dating to the late Middle Bronze Age and the beginning of the Late Bronze Age (Fig. 19). Reconstructed ground plans of the settlement revealed at least forty-three huts, other postholes presumably represent parts of various fences, extensions, jutting roofs or other useful everyday structures. A few hearths, numerous storage and refuse pits and other pits of unknown function were also excavated. The current state of research prevents us to define different phases of the settlement more precisely or to assess the exact duration of settlement, although we can observe much denser concentration of archaeological structures in central and eastern part of the excavated area. This could indicate that the oldest area of the settlement was located in the central and eastern part and afterwards spread towards north, where buildings are more occasional and there are less cases of visible posthole repairs or overlaps of the floor plans (Fig. 19).

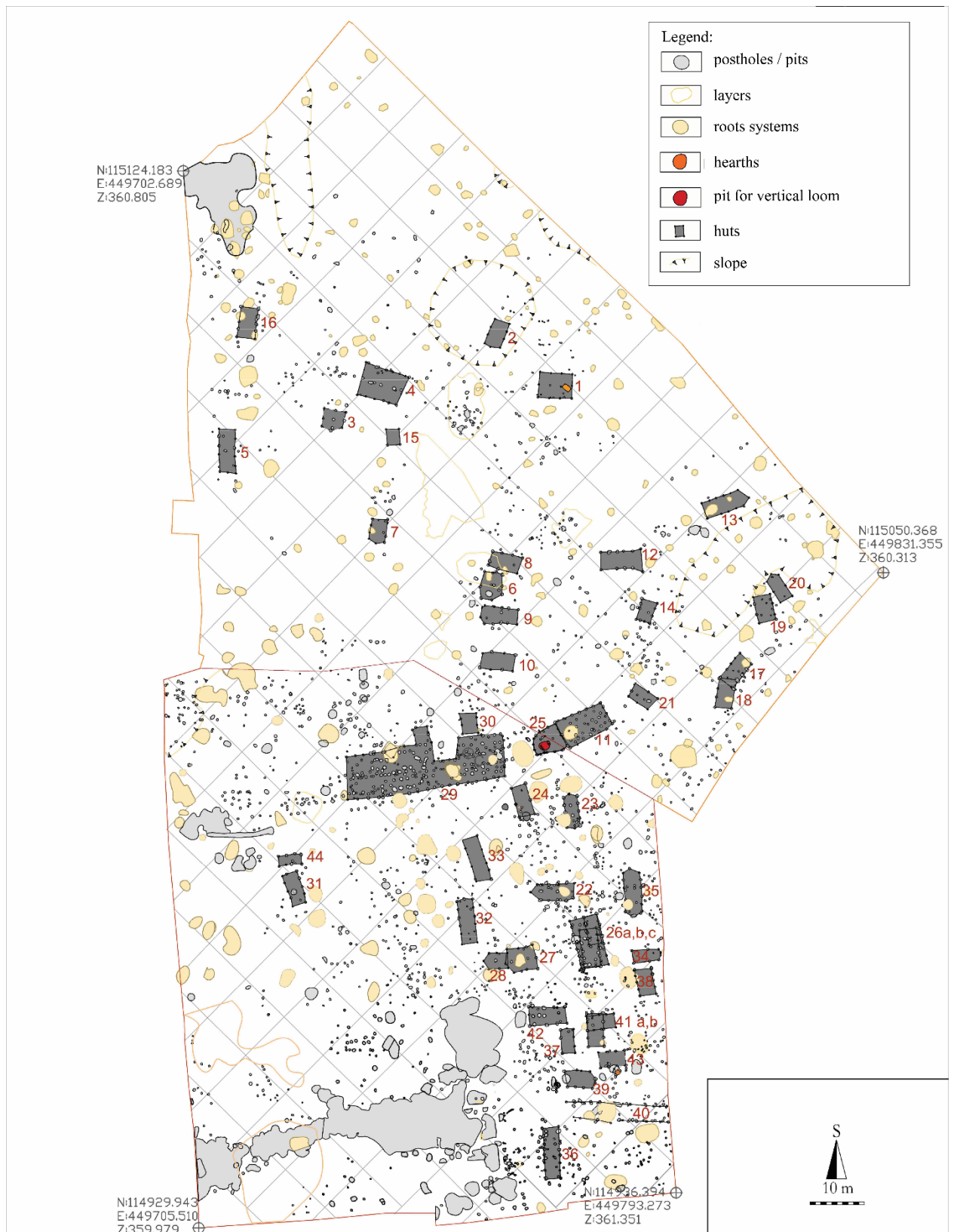


Fig. 19. Trata near Škofja Loka: ground plan of the Middle and Late Bronze Age settlement (after BREZIGAR 2021, priloga 3; načrt 2).

The buildings can be identified on the basis of the location of postholes. The supposed building ground plans show in most cases simple rectangular houses, constructed with two parallel lines of holes for vertical posts. In some cases, a central line of postholes inside the building – that can be interpreted as a line of vertical posts to support the roof – was also documented. The building sizes range between 5 m and 7 m in length and 3 m to 5 m in width. Some buildings, however, are larger and more complex and could reach a size up to 30×10 m (Figs. 19–20).



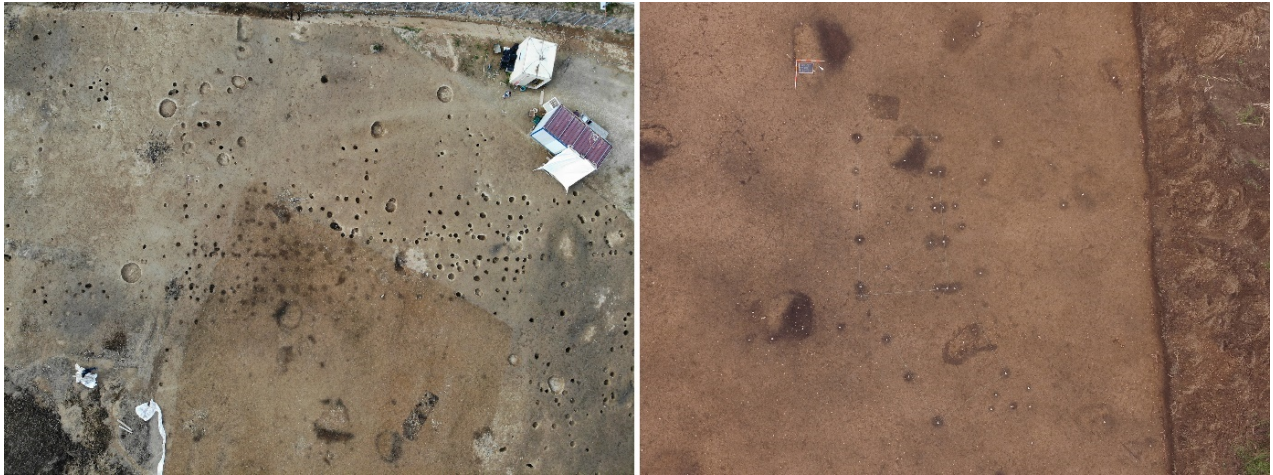


Fig. 20. Trata near Škofja Loka: Hut 29 (left) and overlapping Huts 17 and 18 (right). Photo: B. Brezigar.

Up to now, these large structures are the most extensive Middle/Late Bronze Age structures known from central and eastern Slovenia and can be compared with buildings from Gelsesziget in Hungary, measuring 20×10 m and dating to the Br C phase (HORVÁTH 1994, p. 219). Interestingly, in comparison to the postholes attested at the Medvode-Svetje settlement, most of the postholes at Trata near Škofja Loka did not feature any stones interpreted as wedges for the vertical wooden poles.

The layout of the supposed ground plan of the houses shows that the settlement at Trata near Škofja Loka was a settlement of the scattered type, most likely without any defensive structures, such as wooden fence and/or ditch. Clear settlement boundaries have not yet been discovered, although according to the current state of the research it can be assumed that the settlement extended further east and south, while towards the N and SW occupation density was lower.

Among the finds predominate pottery fragments of broken vessels and tools made of stone, such as querns and grinding stones. Most of the ceramic finds originate from storage and refuse pits, which generally were located in the space between houses (Figs. 19–21).



Fig. 21. Trata near Škofja Loka: example of a storage pit (left) and a refuse pit (right). Photo: K. Dremelj and J. Križaj.

Research on the excavated material from the site Trata near Škofja Loka is still in progress together with the processing and analysis of archaeological excavation documentation and finds. However, the preliminary data of typological and chronological analyses of ceramic finds demonstrates that the characteristic pottery discovered in numerous storage or waste pits is comparable to the ceramic repertoire found within the lowland settlements of the Oloris – Podsmreka horizon (see above; Fig. 1). Most common forms are jars, bowls and cups of different sizes as well as big storage vessels – pithoi. Tunnel shaped lugs and handles are found on all of the mentioned vessel forms and are very common (Fig. 23). Decoration on the pottery is predominantly in form of applied plain horizontal ribs, sometimes with impressions. In some cases, the vessels are decorated with grooves or with groove-encircled knobs, which are very similar to the aforementioned vessels from the Medvode-Svetje settlement (cf. above; Figs. 12: 6; 22).



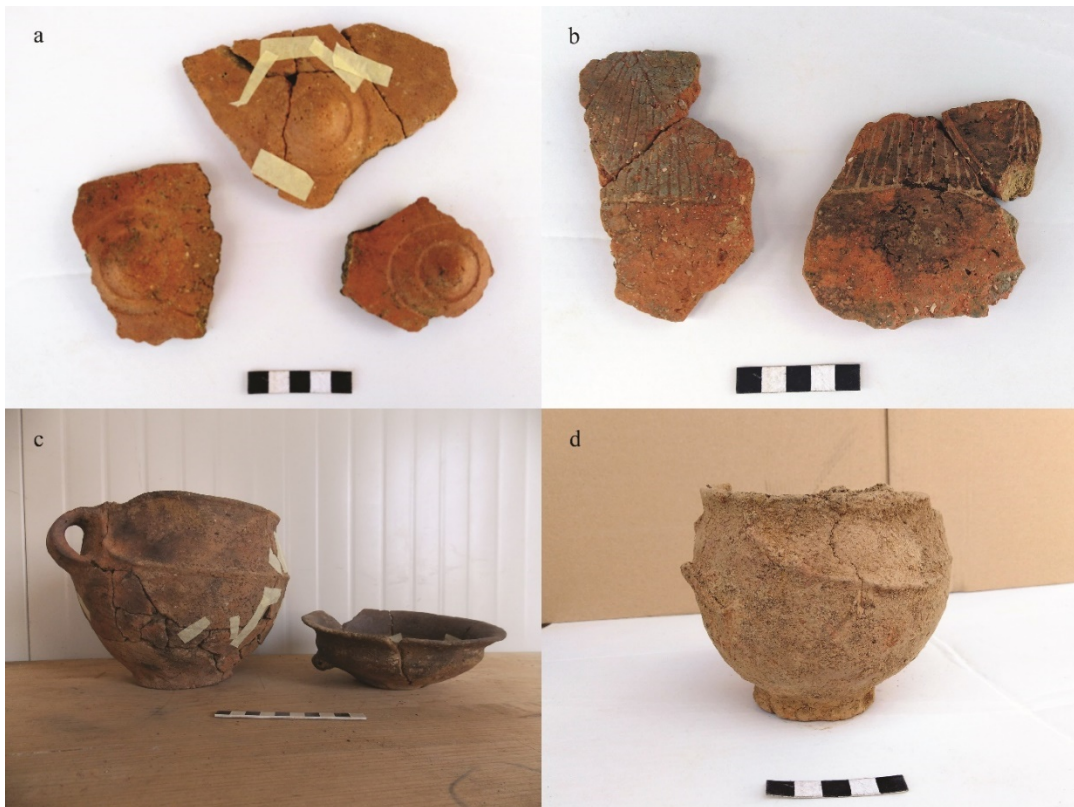


Fig. 22. Trata near Škofja Loka: selection of ceramic finds: a) fragments of ceramic vessels, decorated with groove-encircled knob, b) fragments of ceramic vessel, decorated with incised triangles, c) one-handed jar and a bowl from a storage pit, d) ceramic vessel decorated with plastic ribs. Photo: B. Brezigar.



Fig. 23. Trata near Škofja Loka: pottery finds from the settlement during the analysis. Photo: B. Brezigar.

Up to now, only one sample of charcoal from the storage/refuse pit SU 1280/1281 was sent to radiocarbon dating analysis. The calibrated date ranges between 1435 and 1197 cal BC ( $2\sigma$  - 95.4 %) and indicates that the settlement of Trata near Škofja Loka existed also in the 14<sup>th</sup>/13<sup>th</sup> century BC or in the *middle/late* phase of the Oloris – Podsmreka horizon (Fig. 24).

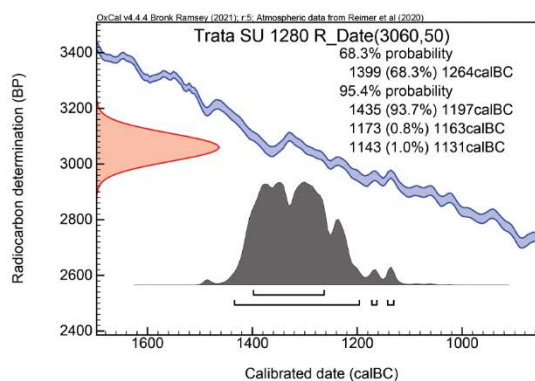


Fig. 24. Trata near Škofja Loka: storage/refuse pit SU 1280/1281 and the result of the radiocarbon analysis of the charcoal sample from this pit. Photo: K. Dremelj.

## CONCLUSION

New research on a number of Middle and Late Bronze Age settlements in central and eastern Slovenia provides us a good basis for a short reflection on settlement characteristics during the Oloris – Podsmreka horizon. Since all the newly discovered sites have not been published yet, it is difficult to give a more comprehensive overview of the discussed topic. However, the main characteristics of lowland settlements can be outlined on the basis of the archaeological settlement remains, new radiocarbon dates and ceramic finds.

It should be pointed out, that the majority of newly discovered sites is located in Dolenjska, Štajerska and Prekmurje regions and that they represent mainly lowland type settlements. In terms of the number and distribution of individual buildings, these lowland settlements can be characterized as village settlements with individual farmsteads or households. As a rule, these settlements were located close to the riverbeds. Defensive structures have been attested at sites Oloris near Dolnji Lakoš and Strjanci. Reconstructed ground plans of the Middle/Late Bronze Age settlements revealed single rectangular buildings, pits of different functions, fireplaces and hearths. Understandably, not all postholes served as holes for the wooden construction posts of the buildings, but can represent the remains of various fences, jutting roofs, extensions etc. Storage and refuse pits located inside or outside the buildings were filled with ceramic fragments, charcoal, stones and burnt clay. Moreover, loom pits have been identified both at Medvode-Svetje and Trata near Škofja Loka settlements. Building ground plans were in most cases reconstructed with the position of individual postholes and distinct concentrations of wattle and daub remains or ceramics. These reconstructions can sometimes be problematic, since the majority of postholes did not reveal any archaeological finds. Furthermore, the majority of samples sent for radiocarbon dating analysis come from storage/refuse pits and not from postholes. Hence it follows, that making estimations on which and how many houses were inhabited simultaneously and how did these settlements change throughout time is very difficult.

The most common form of attested huts is one- to two-roomed rectangular building. In some settlements the buildings were oriented in the same direction (e.g., Oloris near Dolnji Lakoš), while in the majority of other sites it seems that the buildings were concentrated around the apparently empty central areas where only fireplaces were discovered (e.g., Pince near Lendava). Furthermore, circular enclosures or pit-dwellings were also attested at sites Sodolek, Pod Kotom-Sever near Krog and Vače. The ground plans of settlements give the impression that we are dealing with open settlements of scattered type with rural character. As already pointed out, it is highly problematic that we still do not understand fully which or how many buildings were inhabited at once. Moreover, in most cases it is not possible to identify the individual settlement phases at sites that were otherwise inhabited for more than three hundred years. In this sense, the settlement at Medvode-Svetje is exceptional as it gives prospect to possibilities to discern three distinct settlement phases.

It can be argued that the majority of settlements in central and eastern Slovenia appeared already in the Br B2/C1 phase, that is, in the late 16<sup>th</sup>/beginning of the 15<sup>th</sup> century, if not even earlier, and were abandoned by the end of the 13<sup>th</sup>/beginning of the 12<sup>th</sup> century BC. Different settlement dynamic can be observed for example at the hilltop settlement Brinjeva gora above Zreče or at the lowland settlement Pod Kotom-Sever near Krog. The oldest Bronze Age structures from the latter site are dated already to the Br B1 – Br C2 phases, that is, from the end of the 17<sup>th</sup> until the 15<sup>th</sup> century BC according to the obtained absolute dates (KERMAN 2011, p. 32). Interestingly enough, in the following centuries (Br C/D – Ha A1 phases) the settlement area shifted to different location in the vicinity of the older settlement core (KERMAN 2011, p. 45).

The most common features discovered in the Br B2/C1 settlements are non-dwelling structures such as storage/refuse pits (e.g., Medvode-Svetje, Kamna Gorica, Malečnik, Nedelica near Turnišče, Pince near Lendava etc.) or ditches

(Sodolek). Surprisingly, proper building remains dating to this very period are rarely attested (Pod Kotom-sever near Krog, Obrežje)<sup>9</sup>. The reason why such features are scarce could be sought in the fact that most of the sites has been damaged in the upper soil segments due to ploughing, therefore only structures dug in the geological bedrock survived. Moreover, we have to bear in mind that many settlement features (e.g., postholes without finds) cannot be dated more precisely. It should not be overlooked, that the majority of radiocarbon dated samples originate from pits and not from the building structures itself. The settlement at Pod Kotom-Sever near Krog, where as much as three houses, a circular structure and a pit, all dated to the phase Br B1 – Br C2, have been preserved (KERMAN 2011, pp. 29–34, fig. 23; KERMAN 2014, fig. 7.4.2), clearly shows that the absence of dwelling structures from the 16<sup>th</sup> and 15<sup>th</sup> century BC at other sites can be associated for now with the poor preservation of the sites in the region. The planned systematic analysis and publication of the settlement Trata near Škofja Loka rises expectations to solve at least some of these open questions.

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<sup>9</sup> The publication of the Middle and Late Bronze Age settlement at Obrežje, where huts dating already to the Br B2/C1 were discovered, will certainly give us further answers to this topic (MASON, KRAMBERGER, in prep.).



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