

The Beginning of the Bronze Age in South Bohemia

Daniel Hlášek – Ondřej Chvojka

ABSTRACT

The paper discusses the development of settlements in the Early Bronze Age and at the beginning of the Middle Bronze Age in South Bohemia. Based on the typo-chronological analysis of the finds and radiocarbon dating, we have identified four phases of development within this period. The innovation signalling the transition into the Bronze Age was taken on from the Danubian region, which is shown by the spatial development of the settlement. Nevertheless, the overall cultural nature of the artefacts is mixed, which is related to the strategic location of the region, undoubtedly with an important trade route leading through the region, connecting the metallurgical centres in the eastern Alps with the dynamically developing northern parts of the European continent.

KEY WORDS

South Bohemia; Early Bronze Age; beginning of Middle Bronze Age; chronology; radiocarbon dating.

INTRODUCTION

The settlement of South Bohemia at the beginning of the Bronze Age is also the beginning of a continuous settlement of this region, essentially continuing until today. With previous, rather sporadic, evidence of a Neolithic and Aeneolithic population (cf., e.g., BENEŠ – CHVOJKA 2007), it can be assumed that the impulse for the colonisation of this territory came probably not just from environmental reasons, but especially social ones. It is assumed that due to its strategic location between important copper mines in the Alps and dynamically developing northern areas, South Bohemia played a significant role in providing a transregional distribution network. The basic theoretical concept of the South Bohemian group of the Early Bronze Age was established in the mid-20th century (HÁJEK 1954), and since that time, despite the research at essential sites, it has been modified to a minimum extent (cf. CHVOJKA 2007). With the constantly growing evidence and new results of various analyses (including radiocarbon dating), it is desirable to summarise our knowledge of the beginning of the Bronze Age in South Bohemia. Respecting the conventional sorting of archaeological material and its similarity, it is necessary to pay attention here also to the beginning of the Middle Bronze Age. In this paper, we attempt to draft the artefactual, chronological, and spatial aspects of the initial phases of the Bronze Age in South Bohemia, which are essential for our understanding of the local historical processes.

ENVIRONMENTAL FRAMEWORK

The South Bohemian prehistoric ecumene was always clearly distinguished from the non-settled territory, corresponding to the geomorphological characteristics of the region (**Fig. 1**). The Šumava (Bohemian Forest) formed a natural border in the southwest, the Novohradské

Hory (Nové Hradky Mountains) in the southeast and the Českomoravská Vrchovina (Bohemian-Moravian Highlands) in the east. The northern boundary is determined by the rising Středočeská pahorkatina (Central Bohemian Hills). There are two distinctive geomorphological features – the České Budějovice Basin and the Třeboň Basin, the former having played an important role in the configuration of the Early Bronze Age settlement, which was concentrated around its periphery. This area is also the most climatically favourable part of South Bohemia (the highest number of summer days, the highest average temperature, the lowest precipitation; CHÁBERA *et al.* 1985). The Vltava River is an important water-course, attracting settlements while also forming a natural north-south-oriented communication corridor. Other water-courses of lower orders connected with the settlement network include the Malše, Lužnice, Otava, and Blanice Rivers (**Pl. 3/1**).



Fig. 1: Location of South Bohemia.

South Bohemia is also located in the centre of the moldanubic zone of the Bohemian Massif. Acid mineral types are dominant in the entire region. Local geest from graphitic paragneiss outcrops was used for adapting the surface of ceramic vessels already in the Early Bronze Age. There were also rich gold deposits, both primary and secondary. There are numerous finds of gold objects from the Early Bronze Age, however, there is still no direct evidence of gold exploitation. The soil quality is not on a par with that of the traditional settlement area in the northern part of Bohemia, soils of the black type (chernozem) characteristic of warmer areas are absent, while brown earth occurs only rarely. Strong soil acidity also hindered the preservation of osteological material and is likely to have had an impact on the preservation of pottery. The condition of the archaeological sources is also significantly affected by the subsequent use of the land. It was subject to quite intensive agricultural activity, though relatively large areas are still covered with forests (CHÁBERA *et al.* 1985). It is in the forest areas where sites from the Early Bronze Age with authentic relics are preserved in the terrain relief (hillfort fortifications, tumuli).

HISTORY OF RESEARCH

The first finds from the beginning of the Bronze Age in South Bohemia were collected as early as in the second half of the 19th century. The eponymous hoard of Křtěnov axe hammers is an example of finds from this period (RICHLY 1894). Already the first synthetic works related the, still not numerous, finds from the Bronze Age to the trade connection of Central Bohemia with the Danubian region (EISNER 1922–1923, 13–26; SCHRÁNIL 1921), not assuming permanent settlement. This opinion was contested based on the research of tumulus burial grounds (DUBSKÝ 1946). In the middle of the 20th century, Ladislav Hájek established a South Bohemian group of the Únětice culture, based on the inventory of all, the then known, finds. The group was defined primarily by burying under tumuli. The main economic activity of the population was believed to have consisted in trading with copper ore, with mutual contacts between the Únětice culture, the Straubing culture in Bavaria, and the Unterwölbling type in Austria. Hájek also expected gold washing to be a source for the richness of the Bohemian Únětice culture (HÁJEK 1954).

The second half of the 20th century was marked by several major excavations. In the 1960s and 1970s, Josef Poláček studied the hilltop settlement of Mříč-Dívčí Kámen (preliminary monograph, POLÁČEK 1966). Antonín Beneš excavated, for example, in Vrcovice-Dolní Lipice (HLÁSEK *et al.* 2015a), in a lowland stratified settlement in Písek-Řeřichova Cihelna, and in Hosty, the presumed location of a trading post with contacts with the Carpathian Basin and the northern areas (BENEŠ 1988; 1989; BŘICHÁČEK 1991). The Danubian nature of the South Bohemian group led M. Bartelheim to exclude it from his complex treatment of the Bohemian Únětice culture (BARTELHEIM 1998). The relationship between South Bohemia and the central Danubian region was the topic of J. Havlice's thesis (2000). His updated list of sites has become the basis for this paper. An important step was the comprehensive treatment of the metal hoards of the Únětice culture by Václav Moucha, which includes also numerous finds from South Bohemia (MOUCHA 2005).

In recent years, the research of the Bronze Age has focused on studying new metal finds (most recently, CHVOJKA – JIRÁŇ – METLIČKA 2017; CHVOJKA *et al.* 2017). There is an increased interest also in hilltop settlements and hillforts (e.g., PARKMAN 2003; HAVLICE 2004; CHVOJKA – JOHN 2006; 2009; CHVOJKA – JOHN – ŠÁLKOVÁ 2008; CHVOJKA *et al.* 2010; 2013; HLÁSEK *et al.* 2015a; 2015b). Due to the absence of publications of larger studies, but also the present condition of the source base, the current state of knowledge concerning pottery is insufficient. Processing a larger pottery collection from the hillfort near Vrcovice, dated to the beginning of the Middle Bronze Age (HLÁSEK *et al.* 2015a), suggests the possibility of a more detailed periodisation of the beginning of the Bronze Age in South Bohemia. The outline is provided in this paper.

THE SOURCES

The sites from the beginning of the Bronze Age in South Bohemia can be divided into several components that may reflect the original purpose of the activity areas (i.e. traditional archaeological elements, such as hillforts, settlements, burial sites, hoards) as well as those that can only be a consequence of archaeological transformation while their original purpose is unclear (finds of pottery and isolated bronze or stone artefacts). To understand the development of theoretical research, it is useful to be aware of the development of the source base (**Fig. 2**).

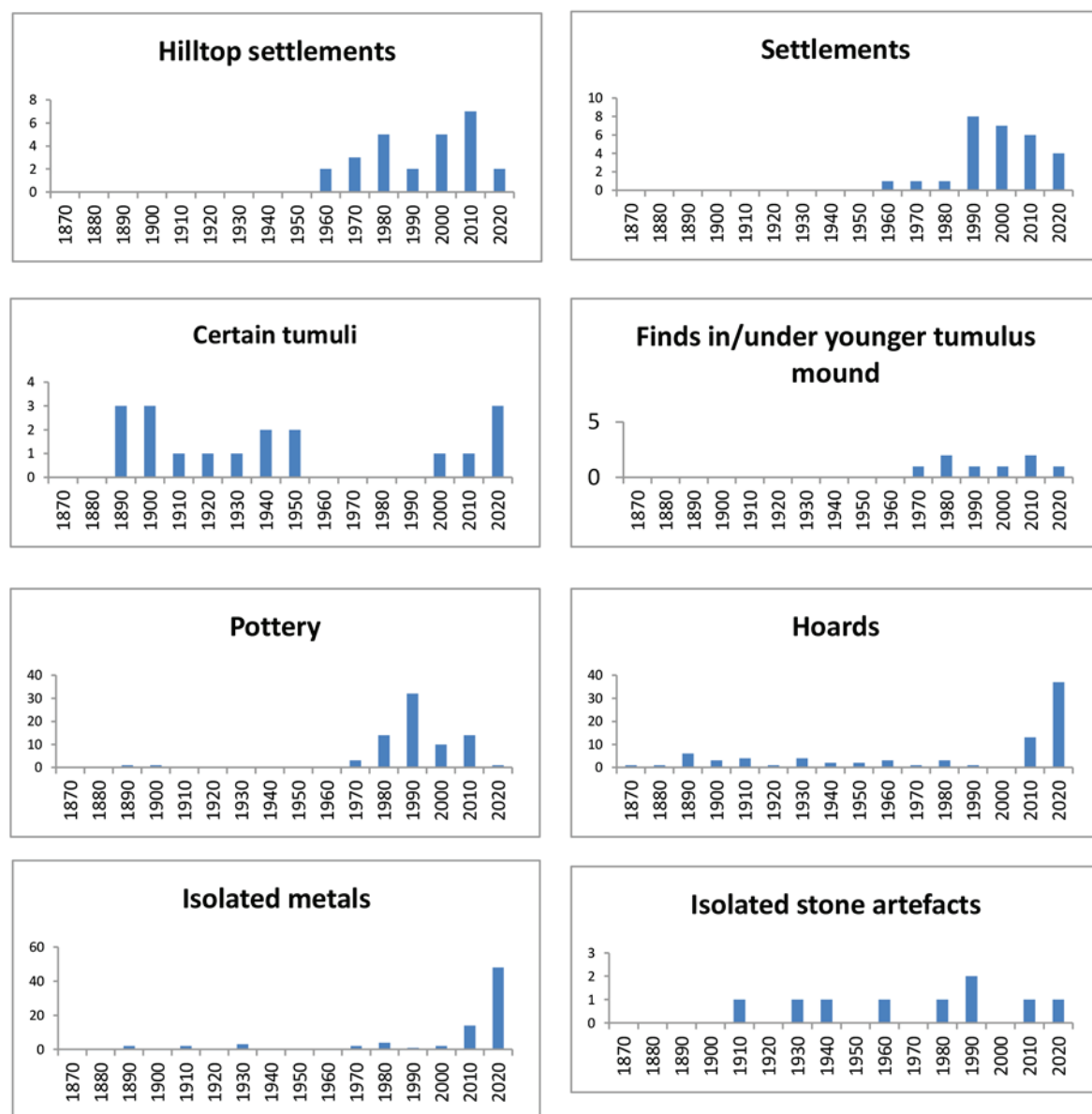


Fig. 2: The development of the source base. The histograms show the number of newly discovered components per decade.

The phenomenon of hilltop settlements, some of them demonstrably fortified, is typical especially for the later phases of the period. Their purpose is not entirely clear; usually, they were probably the seats of elites or central points that controlled the trade network. Yet, it is not securely supported by the inductive method. Their different purpose or internal hierarchies cannot be ruled out. Where the fortifications have been preserved, the enclosed area is small and does not exceed 1 ha. The fortifications were examples of a sophisticated monumental architecture in the form of walls and ditches. These elements could be multiplied (Vrcovice, Opalice /?/, Hluboká nad Vltavou /?/). While in the middle of the 20th century, only one hilltop settlement/hillfort was known (Vrcovice), the last published listing included as many as 30 (HLÁSEK 2015a, tab. 37). However, this list should be critically reviewed, because some sites

were probably wrongly dated (Čichtice: PARKMAN 2004; Orlík nad Vltavou: FRÖHLICH – EIGNER 2010), whereas others were newly discovered (Písecká Smoleč, Oslov) in the meantime.

Settlements include sites with recorded settlement features, layers or surface collections, which offer a large number of artefacts, apparently of a residential nature. The best studied settlement is that of Hosty, in which even the ground plans of above-ground buildings were documented (BŘICHÁČEK 1991), however, it is still waiting for an overall evaluation. Other studied settlements are usually composed of solitary features, not allowing specific interpretation, or sole layers saturated with finds (CHVOJKA 2010).

Burials under tumuli are typical for burying of the Early Bronze Age in South Bohemia. There are many tumulus burial grounds with recorded activities from the Early Bronze Age, however, these sites were also used for burying in later phases. Furthermore, no tumulus burial ground has been studied in its entirety, thus, we cannot claim anything about the internal structure of the burial grounds (MILITKÝ 1998; HAVLICE 2001). The majority of the Early Bronze Age tumuli were studied before the middle of the 20th century, which corresponds to the insufficient information about the discovery circumstances; an exception can be found in Vodňany, studied at the end of the 20th century (MICHÁLEK 1996, obr. 4). Recently, proof has started to appear that tumulus burials also existed in the northern half of Bohemia (HAVLICE 2001, 60–62; DANIELISOVÁ *et al.* 2013, 78–82), thus, it is possible that the exclusivity of South Bohemia tumulus burials consists only in the more favourable conditions for the preservation of tumulus mounds in a forest landscape. There is no secure evidence of other than tumulus burials in South Bohemia.

A specific type of Early Bronze Age components are features or layers under the later tumulus mounds, or dispersed finds, mostly of a residential nature, directly in the tumulus body. These situations can perhaps be considered to be the original settlement components, overlaid by later funeral activities, still, there are a number of examples of such sites (e.g., Dobešice, Křtěnov, Plav, Radošovice, Týn nad Vltavou; BENEŠ 1997; KRIŠTUF – RYTÍŘ 2009; CHVOJKA – MICHÁLEK – ZAVŘEL 2011; CHVOJKA – ZAVŘEL in print), thus, such situations cannot be coincidental, rather, they are a result of systematic behaviour with an unclear purpose.

Some sites include only pottery finds. These can also be whole vessels without known detailed discovery circumstances, but primarily there are fragments of pottery from surface collections. Such finds, given the susceptibility of the ceramic material to decomposition in a dynamic environment, can be treated as the remnants of some of the already mentioned components, rather than isolated solitary losses.

Hoard of metal objects are an important component, occurring throughout the entire studied period. They consist of both finished bronze objects and copper raw material. Since the onset of the wide use of metal detectors at the turn of the millennium, the source base has multiplied. The situation in the publications of hoards is currently satisfactory (MOUCHA 2005; CHVOJKA – JIRÁŇ – METLIČKA 2017).

The most numerous are isolated finds of metal objects, recently increasing due to the use of metal detectors. In some cases, these may be solitary lost objects, but at the same time, they can also be the remains of one of the already mentioned components. New finds recorded by archaeologists are continuously being published (FRÖHLICH *et al.* 2005; FRÖHLICH – CHVOJKA – JIŘÍK 2010; CHVOJKA – ČERVENKA 2008; CHVOJKA – FRÖHLICH 2013; CHVOJKA *et al.* 2017). A similar provenance is likely in the case of isolated stone artefacts, only a few of which can be confidently assigned to the Early Bronze Age (e.g. saddle shaped hammer-axes; FRÖHLICH 1985). The solitary finds of stone arrowheads, often dated to a wide time-span of the Aeneolithic to Early Bronze Age, allegedly belong to the beginning of the Bronze Age in South Bohemia.¹

1 We would like to thank Dr. Alexander Binstener for consulting with us.

CHRONOLOGY

The first periodisations of the Early Bronze Age in Central Europe were made in the 1920s, distinguishing two successive phases (SCHRÁNIL 1921; REINECKE 1924). Subdivisions of the Czech Únětice culture were proposed based on the burial site at Polepy by Václav Moucha, identifying as many as six phases. He considered South Bohemia to be practically unpopulated during the earliest phases, with settlement beginning in what he defined as the 'Classic phase' of the culture (MOUCHA 1963, 50). Walter Ruckdeschel, in turn, breaks down Reinecke's chronology based on the graves of southern Bavaria (RUCKDESCHEL 1978).

During that time, the issue of a detailed chronology of the South Bohemian Early Bronze Age was finally tackled. Antonín Beneš proposed a division into two periods based partly on his own excavations. The earlier period is to be synchronised with the Classic phase of the Únětice culture of Central Bohemia, and with the Unterwölbling type and the Straubing culture in the Danubian area in Austria and Bavaria. The latest stage also based on his unpublished research, is allegedly contemporary with the Maďarovce-Věteřov-Böheimkirchen groups (BENEŠ 1978, 348–350).

Since the end of the 1980s, radiocarbon dates became available in the west, offering a whole new perspective on the absolute chronology of the entire period (BECKER – KRAUSE – KROMER 1989). Wolfgang David (2002) brought a slight modification to Ruckdeschel's division. Stephan Möslein identified the phases of the Straubing culture; the pottery groups established on the grounds of settlement assemblages are especially valuable for the South Bohemian issue (MÖSLEIN 1998). Although at the turn of the millennium very detailed chronologies were already available, Václav Moucha used Reinecke's original 1924 scheme when working with the metal hoards from Bohemia (including South Bohemia) (MOUCHA 2005). Moucha's scepticism towards a detailed chronology was partly validated by a large new set of radiocarbon dates obtained from the graves in southern Germany (STOCKHAMMER *et al.* 2015), on the one hand disproving to some extent the expected sequence of typological phases, while on the other hand revealing their partial concurrence (Br A1a, A1b, A2a). The authors of the research rejected the evolutionist view of the development of the Early Bronze Age and do not regard the A1 and A2 phases as chronological, but rather as regional phenomena. Another important finding for our region was the moving of the end of the Early Bronze Age further back to ca. 1700 BC (STOCKHAMMER *et al.* 2015), which also corresponds to our finds. The aforementioned study calls into question the validity of the existing periodisations, which are used as the basis also for the South Bohemian material. However, we do not believe that it fully denies it, owing to the fact that only one type of artefact was used to determine the phases, namely pins, which could have a specific purpose in its original live culture (*cf.* SCHWARZ 2016).

Our chronological classification of the South Bohemian material culture, offered hereby, is based on the traditional typology and chronological systems of the neighbouring regions, validated by our radiocarbon dates. While the metal artefacts traditionally received significant attention, thus offering identification without major difficulties, the pottery represents a more difficult issue. Modest decoration and the low-profile variability of the upper parts of ceramic vessels especially hamper the analysis of the fragments of settlement pottery, which have the same characteristics throughout the entire Early Bronze Age up until the beginning of the Middle Bronze Age.

Four phases are identified with an expected chronological sequence. However, the life-span of the individual artefacts could exceed the phase limits; therefore, the boundaries of the individual phases are not sharp and could blend together. The proposed absolute dating of each phase is only indicative. It is based on radiocarbon dates which are, however, distributed

unevenly. The majority of them come from the final B1 phase, with the presented absolute time frame of 1650–1500 BC. Its validity has also been tested using the Bayesian model (**Fig. 3**; on the method see BRONK RAMSEY 2009), with the results being the most probable ones among the presented phases. In view of the presumed continuity of development and typological changes to artefacts, we expect the frames for each phase to be roughly equally long (ca. 150 years). This assumption has not yet been disproved by radiocarbon dates.

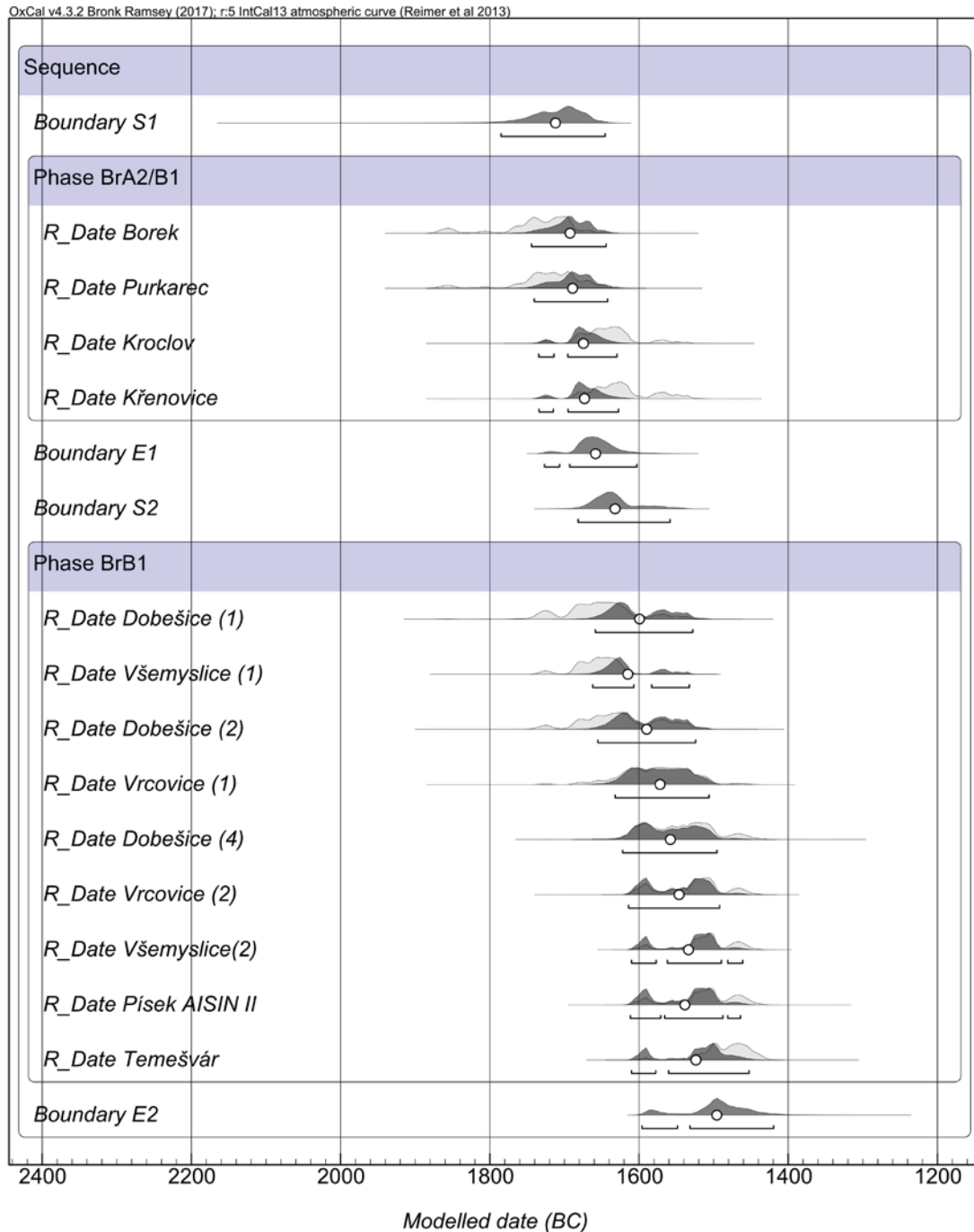


Fig. 3: Bayesian modelling of the Br A2/B1–B1 overlap on the basis of all available radiocarbon dates.

THE SETTLEMENT DEVELOPMENT

PREVIOUS AGRICULTURAL SETTLEMENT

Based on the limited number of finds and the very nature of the Neolithic and Aeneolithic sites, the occupation of Southern Bohemia is not assumed to have been very intense in these periods. Even so, this view can be largely affected by the combination of a significant archaeological transformation and of the state of the research. The image of the Neolithic population is mainly comprised of isolated finds of ground stone tools; there are several known settlements belonging to the Linear Pottery culture (MICHÁLEK *et al.* 2000; ZÁPOTOCKÁ 2011; VONDROVSKÝ *et al.* 2018). Despite the discovery of new settlements in recent times, the settlement pattern still cannot be quantitatively compared to the northern part of Bohemia. The situation is similar in the Aeneolithic period, with known hilltop sites from the Middle Aeneolithic, along with the polished stone industry (MICHÁLEK 1989; 1992; FRÖHLICH – EIGNER 2010; JOHN *et al.* 2012). The latest Aeneolithic radiocarbon date from these sites comes from the middle of the 3rd millennium BC (2580–2450 BC; JOHN *et al.* 2012).² Clear evidence of a settlement from the following Late Aeneolithic (Corded Ware and Bell Beaker cultures) and the oldest phases of the Early Bronze Age from South Bohemia is still lacking.

BR A1/A2 (?–1950 BC)

The first documented phase of colonisation, after the now apparent hiatus lasting roughly 500 years, is represented, above all, by the metal artefacts. The characteristic artefact of this period is a pin with a disc-shaped head (*Ruderkopfnadel*), known from tumulus 1 in Hluboká nad Vltavou (HÁJEK 1954) and from hoards (Hrbov, Srnín: new, as yet unpublished finds). An exceptional site is Opalice – a promontory above the Vltava River which provided as many as four hoards along with isolated finds dated to this phase, including one example of the aforementioned pin type (CHVOJKA – JIRÁŇ – METLIČKA 2017, 41–43). The earliest radiocarbon date of the South Bohemian Bronze Age comes from hoard No. 2 from Opalice, in which fibre was preserved inside a bracelet: 2460–1970 BC (CHVOJKA – JOHN – ŠÁLKOVÁ *in prep.*). The promontory is divided by a fortification of two ramparts and a ditch of unknown dating (CHVOJKA – JOHN 2009), though comparison with other similar hillforts suggests its probable later date. Prominent artefacts of this phase include also decorated phalerae (*Zierscheiben*), known from the hoards (Kosov: MOUCHA 2005, tab. 210; Hrbov), and as isolated finds (Hluboká nad Vltavou: CHVOJKA – FRÖHLICH 2013, fig. 3:1). This phase will certainly include also numerous isolated finds as well as hoards of ring ingots, that should survive also into the following phase.

We include – with caution – only one settlement into this earliest phase (České Budějovice-Čalounova Zahrada; ZAVŘEL 1993, fig. 6B:9) based on pottery that bears an analogy to the earliest settlement assemblages of the Straubing culture (MÖSLEIN 1998, fig. 15). The recently published finds of pottery from the early phases of the Únětice culture from the tumulus near Maršov (ŠÁLOVÁ – CHVOJKA – MENŠÍK 2016) have rather unclear find circumstances, and, therefore, we have excluded them from our study. The few more certainly dated sites are strikingly concentrated in the southern part of the České Budějovice Basin, with a close connection to the upper reaches of the Vltava River (**Fig. 4: 1**).

2 The calibration of radiocarbon dates for the entire paper was performed with the OxCal v. 4.3 program, using the IntCal 13 calibration curve (REIMER *et al.* 2013). Calibrated ranges with the probability of 2 sigma, i.e., 95.4%, are presented.

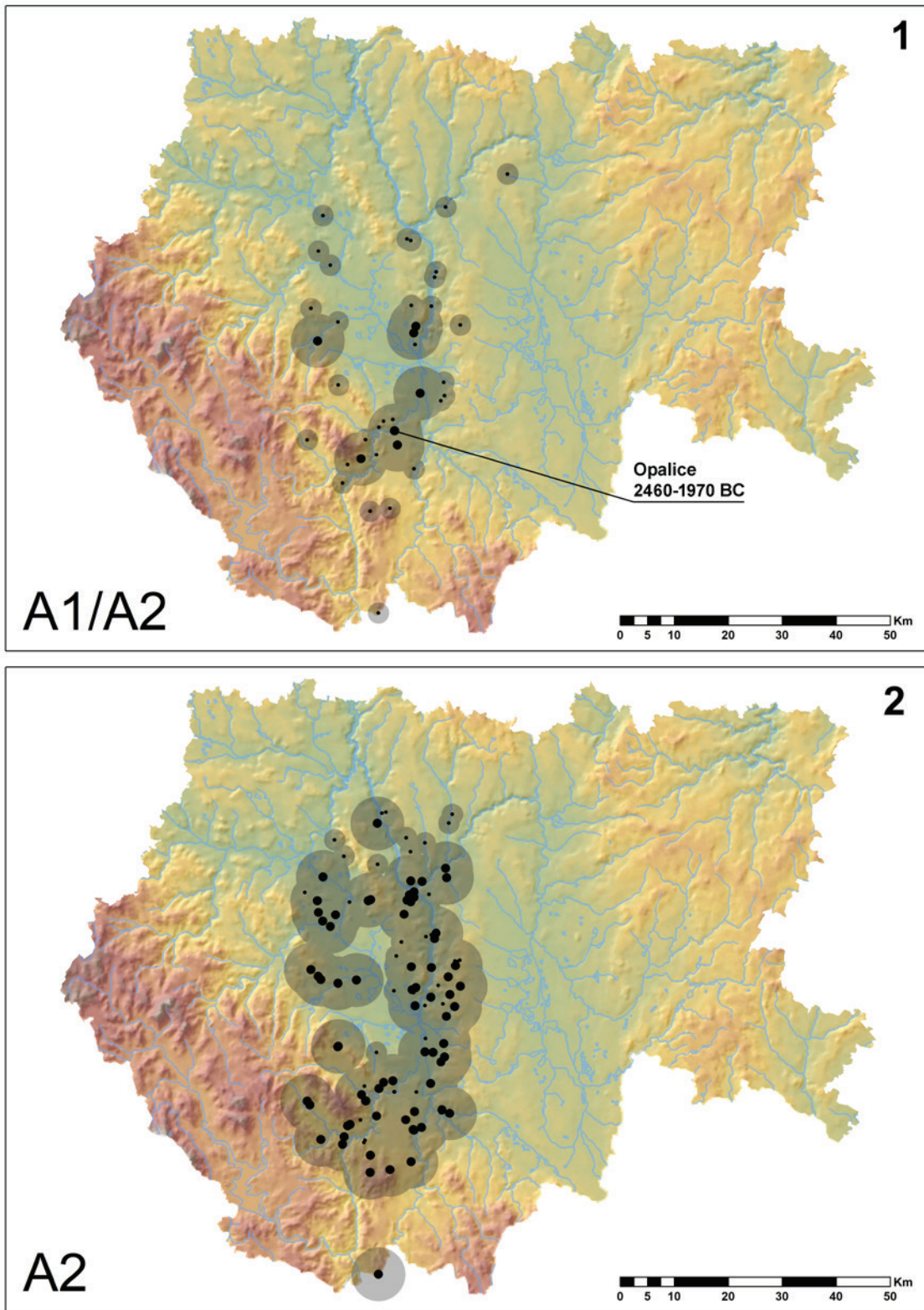


Fig. 4: The development of the southern settled ecumene in the phases Br A1/A2 (1) and Br A2 (2). Only closely localised sites are displayed. Larger dots show exact dating within a given phase, smaller dots represent lower certainty.

BR A2 (1950–1800 BC)

The next phase includes especially a broad range of bronze artefacts. Pins in South Bohemia include examples of the Únětice type, Cypriot, with a vertically coiled head, with a clover-shaped head or a flat head. The pins come from both tumuli and hoards. There are numerous finds of ring ingots, both from hoards and isolated. Tumuli, associated with the Danubian region, are found in sheet as well as spiral variants. Jewellery of the period further includes cone-shaped badges, necklaces with cone dividers, barrel-shaped beads, and also amber beads. Certain types of axes are also characteristic. Tumuli originating in this phase include Hosty, Těšínov or Vodňany (HÁJEK 1954; MICHÁLEK 1996, fig. 4). Apart from the accumulated finds of ring ingots, there are noteworthy hoards from Kamenný Újezd-Plavnice (MOUCHA 2005) or Komařice (CHVOJKA – JIRÁŇ – METLIČKA 2017). So far, the only certain settlement of this period is Hosty. The preliminarily published pottery can be assigned to the Burgweinting/Viecht pottery group (BENEŠ 1988, fig. 3:1; MÖSLEIN 1998, fig. 1). The settlement in Hosty probably survived until later. Typical shapes should include also the Únětice cup with a low profile, prominently angled bulge, and an open neck (HÁJEK 1954, fig. 12:9, 19; CHVOJKA – MICHÁLEK 2013, fig. 5:6). As of now, there are no radiocarbon dates from this period from South Bohemia. There is an apparent enlargement of the occupied area, extending in a northerly direction and concentrating around the lower reaches of the Blanice River and the Vltava and Lužnice confluence, where the aforementioned Hosty settlement is also situated (**Fig. 4: 2**).

BR A2/B1 (1800–1650 BC)

It is this phase of the studied period that produced the largest amount of evidence. This condition depends primarily on two significant and very numerous artefacts: rib ingots and pins with a round head and a skew hole. There is a striking concentration of hoard finds of rib ingots in South Bohemia, while their main area of occurrence is the eastern Alpine region, where they were produced from local copper ores. In contrast, in other neighbouring regions, copper rib ingots are found rather sporadically. The incidence of rib ingots in South Bohemia is related to the role of the transit region in the distribution of the Alpine materials further north (e.g. CHVOJKA – HAVLICE 2009; CHVOJKA – JIRÁŇ – METLIČKA 2017, 199). There are several radiocarbon dates obtained from the South Bohemian hoards of rib ingots or the remains of organic ties used to bind them in bundles: Purkarec 1869–1632 BC (CHVOJKA – HAVLICE 2009, 77, fig. 31), Kroclov 1735–1545 BC (not published; preliminary findings on the hoard: CHVOJKA – JOHN – ŠÁLKOVÁ 2016), Křenovice 1691–1532 BC (not published). Another key artefact from the period, which could, however, occur also during the previous phase, is a pin with a round head and skew hole; though the listing of their finds in South Bohemia has been published recently (CHVOJKA *et al.* 2014), new finds have appeared in the meantime. They are often found in tumulus mounds, but so far none has been documented in the context of a specific burial. This type of pin represents a typical part of the local costume at that time. Some types of axes are also typical (e.g., Langquaid).

The pottery from this phase belongs to the Sengkofen/Jellenkofen pottery group (MÖSLEIN 1998, 48–52); this should also include the following phase (**Tab. 1**), from which we have compiled a representative set of pottery from the hillfort at Vrcovice (more than 20,000 fragments of pottery; HLÁSEK *et al.* 2015a). In determining the principal type fossils in pottery assemblages, we took care to identify elements that belong to the mentioned pottery group (Sengkofen/Jellenkofen), occur frequently enough in the assemblages, and, at the same time, are not significantly present or are entirely absent in the later Vrcovice assemblage. While we

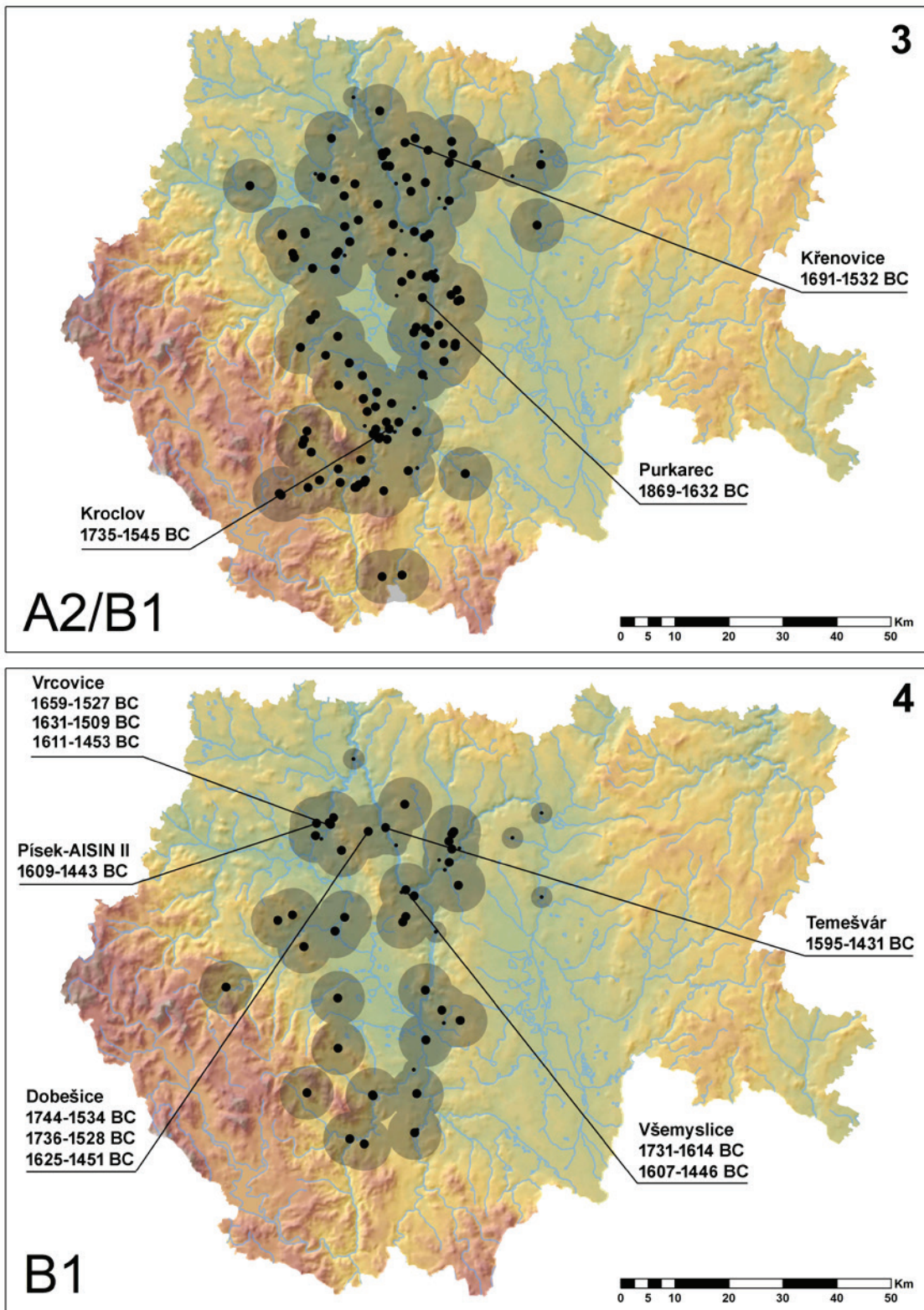


Fig. 5: The development of human occupation in South Bohemia in the phases Br A2/B1 (3) and Br B1 (4). Only closely located sites are displayed. Larger dots show exact dating within a given phase, smaller dots represent lesser certainty.

are aware of the risk of the specificity of a single site, the current state of research offers no other option. We consider the determining elements characteristic of this period to be a bowl with a goose-neck profile, with a stretched edge indented inside, and a horizontal series of punctures or pegs in the wall of the vessel.

It was probably in this phase that a more frequent use of hilltops began: Bechyně, Dobřejovice-Hradec, Hluboká nad Vltavou-Baba, Chřešřovice-Sv. Jan, Chvalšiny-Mlýnské vrchy, Mříč-Dívčí Kámen, Skočice, and Třebanice, even so, precisely dated fortifications are not known. Lowland settlements include Čavyně, Myšenec (MICHÁLEK 2013), Býšov (CHVOJKA – ZAVŘEL 2011), or perhaps Slaník (MICHÁLEK 1989). The occupation reached its peak in the studied period, expanding especially to the north in all directions. The precisely dated sites also suggest the routes leading across the Šumava to the Danubian region (**Fig. 5: 3**).

BR B1 (1650–1500 BC)

The inclusion of the beginning of the Middle Bronze Age in this paper is necessary, because this phase represents an uninterrupted continuity with the previous periods, which is also reflected in the artefact contents. In particular, the fragmentary pottery is very similar to the previous phases, therefore, in South Bohemia it was traditionally classified within the general terminological scope of the ‘Early Bronze Age’. Our data for this phase probably do not fully represent the state of the source base. A critical review of the available evidence on the Middle Bronze Age would be necessary; this, however, exceeds the scope of this work.

The bronze artefacts of this phase primarily include various types of Lochham pins, the earliest sickles in the form of cutting blades, the earliest forms of axes with heart-shaped step, spiral sheet metal armlets ended with rosettes. We also include some hammer-axes of the Křtěnov type here (DAVID 2008). Lumps of copper (plano-convex ingots) become the prevalent form of raw material, but the rib ingots were still in use (cf. Kučeř: 1596–1439 BC – CHVOJKA *et al.* 2018, 214, tab. 2). The pottery spectrum of this phase has been defined especially by the finds from Vrcovice (HLÁSEK *et al.* 2015a); typical features include relief bands with impressions of crescent pegs, engraved triangles filled with punctures, or, for example, an ‘amphora’ with vertical ribbing on the shoulders, but also specific shapes of pottery. There are several typical types of bowls – with holes under the edge, with a T-shaped edge or with lobes.

The occupation of some of the hilltop sites continued to this phase, e.g., Bechyně, Chřešřovice, Mříč-Dívčí Kámen. Some were probably newly settled, e.g., Milenovice, Týn nad Vltavou-Sv. Anna, while the fortifications at Vrcovice and Všemyslice are clearly demonstrated at this period. We also have radiocarbon dates from these hillforts: Vrcovice 1659–1527 BC, 1631–1509 BC, 1611–1453 BC (HLÁSEK *et al.* 2014; 2015a), Všemyslice 1731–1614, 1607–1446 BC (HLÁSEK *et al.* 2015b). Another noteworthy settlement is Písek-AISIN II which produced the radiocarbon date of 1609–1443 BC. Although only one object from this period was uncovered at this site, its importance lies in the settlement continuity throughout the course of the Middle Bronze Age (HLÁSEK *et al.* 2017). Other radiocarbon dates, which could nevertheless partially belong to the previous phase, come from the tumulus near Dobešice (1744–1534 BC, 1736–1528 BC, 1625–1451 BC). The dated samples came from the lower levels of the tumulus mound, also saturated with backfill pottery, preliminarily dated to the Middle Bronze Age; the feature with fragmentary pottery found under the tumulus was dated by the excavators to A2/B1 (KRIŠTUF – RYTIŘ 2009), which, however, does not exclude it from our phase of Br B1. The beginning of the Middle Bronze Age is probably the date of the origin of one tumulus in Plav, under whose stone circle two pins vertically stuck into the subsoil were found, one arguably of the Lochham type (CHVOJKA – ZAVŘEL in print). This phase should also include the crema-

tion graves, mentioned in literature, embedded in the inner rampart of the Vrcovice hillfort. The interpretation of these features as burials is, however, questionable (HLÁSEK *et al.* 2015a). As far as hoards are concerned, we can include here the eponymous assemblage of Křtěnov hammer-axes (MOUCHA 2005), a recent find of a Křtěnov axe hammer and ingots from Nová Ves (CHVOJKA – JIRÁŇ – METLIČKA 2017) or the hoard from Temešvár, including, for instance, a cutting blade stored in a pottery vessel. This hoard is also the source of the radiocarbon date of 1595–1431 BC (FRÖHLICH *et al.* 2016). The picture of the settlement pattern is probably affected by our incomplete database of sites and the apparent low settlement intensity can be misleading. The extent of occupation was probably similar to the previous phase (**Fig. 5: 4**).

South Bohemia	RUCKEDESCHEL 1978	DAVID 1998	MÖSLEIN 1998		MOUCHA 1963	MOUCHA 2005
	Burials, south Bavaria	Burials, east Bavaria	Burials, south Bavaria	Settlements, south-east Bavaria	Únětice culture, Bohemia	hoards, Bohemia
Br A1/A2	A1b	A1b	FB IIa	Ceramic group Burgweinting/ Viecht	5. classic Únětice culture	A1/A2
Br A2	A2a	A2a	FB IIIb		6. post-classic Únětice culture	
Br A2/B1	A2b	A2b	FB IIIa	Ceramic group Sengkofen/ Jellenkofen		Tumuli culture
Br B1	A2c	A2c	FB IIIb		A2/B1	
		B älter				

Tab. 1: Synchronisation table of the described chronological systems.

DISCUSSION AND CONCLUSIONS

We have presented the preliminary results of the analysis of evidence available on South Bohemia at the beginning of the Bronze Age. A more detailed study of the evidence and further field-work will likely correct our knowledge or may even slightly modify it. However, we believe that the main trends of settlement development are valid and reflect the prehistoric reality. The question that remains unresolved is the character of the region in the period preceding the arrival of elements associated with the Early Bronze Age. We have no available archaeological or other independent sources from this period, even so, it is difficult to believe

that the region of South Bohemia was entirely unpopulated. There are two extreme scenarios of the beginnings of the Bronze Age in South Bohemia:

1. In the case of the actual absence of prior human presence, South Bohemia was colonised.
2. In the case of a continuing Aeneolithic population, which is still archaeologically difficult to ascertain, there was penetration of technological innovation in the form of the new metal and associated cultural aspects.

In either case, the geographical spread of the earliest sites suggests that the initial occupied area has apparent links to the south, to the Danubian region with indications of mountain passages across the Šumava. From that moment on, the occupied area gradually expanded in a northerly direction, which could indicate either the continuous increase in the population or gradual adaptation of new technological innovations. The principal cultural orientation of the South Bohemian region, however, was southward also in the subsequent phases of the Bronze Age, including the phase of Br B1, as is apparent, for example, from some pottery elements (the so-called *Doppelhalbkreisstempel*: HLÁSEK *et al.* 2015a, 232–234).

This process is chronologically associated with the beginning of the massive exploitation of copper in the eastern Alps (STÖLLNER 2015, fig. 7) and also the spreading of the bronze technology in the northern parts of Europe (THRANE 2013). South Bohemia was clearly the route for distributing copper ingots, most probably from the Alpine centres of metallurgy, whose form probably gradually changed over the course of the period (ring ingots, rib ingots, plano-convex ingots), while amber was transported across South Bohemia from the north (ERNÉE 2014, fig. 4:A). The role of South Bohemia as an important trade thoroughfare during this period seems to be unquestionable. The busy trade activity most likely resulted in the culturally mixed nature of the artefact contents from the beginning of the Bronze Age in South Bohemia, which is repeatedly pointed out (e.g., HAVLICE 2000). This situation has had an impact on the unanchored terminology. We believe that the use of cultural terminology, with its traditional geographical connotations (such as the Únětice, Straubing or Věteřov cultures), is misleading in our case and it is necessary, at least provisionally, to opt for a geographically neutral reference, South Bohemian group of the Early and the beginning of the Middle Bronze Age, which can be chronologically broken down into the aforementioned four phases.

At the beginning of the Bronze Age, society underwent a certain development, some aspects indicate its increasing complexity, which could also be reflected in the increase in population, the development of the distribution network, but above all the settling of hilltop sites in the final phases and the building of their monumental fortifications. The question still remains open as to whether building hillforts in this developed time indicates the stabilisation of society or the collapse of the system. However, the settlement also continued in the following period of the Middle Bronze Age.

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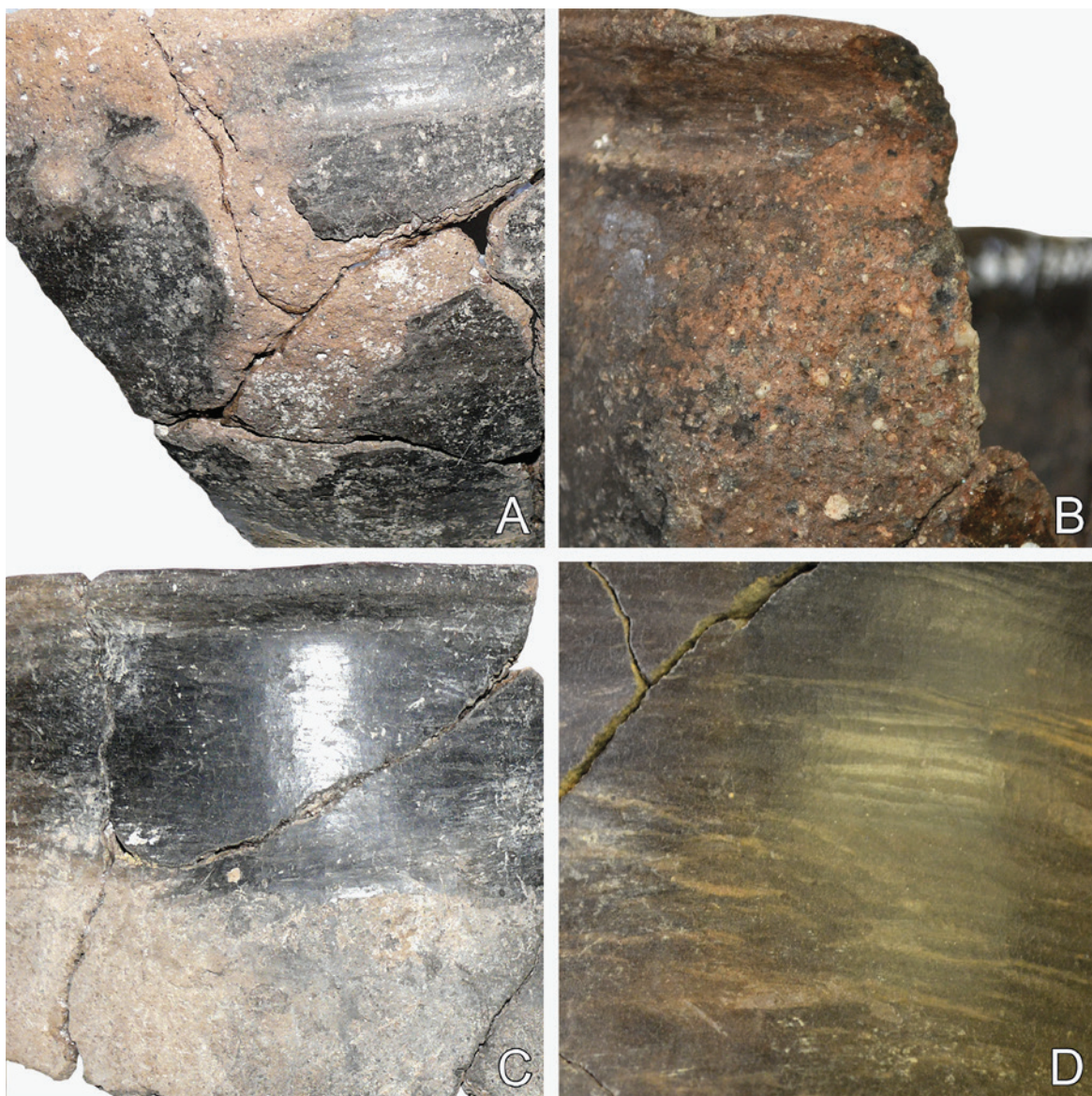
Ondřej Chvojka

Institute of Archaeology, University
of South Bohemia in České Budějovice
Branišovská 31a
CZ-370 05, České Budějovice
ochvojka@ff.jcu.cz

Museum of South Bohemia in České Budějovice
Dukelská 1
CZ-370 51, České Budějovice
ondrej.chvojka@muzeumcb.cz

Daniel Hlásek

Institute of Archaeology, University
of South Bohemia in České Budějovice
Branišovská 31a
CZ-370 05 České Budějovice
hlasda@centrum.cz



Pl. 4/1: Die Detailaufnahmen der Gefäßoberfläche. A, B - Abgewetzte Oberfläche der ursprünglich stark polierten Gefäße, jetzt die grobe „Grundtonmasse“ mit Steinchen sichtbar; C - Gut erhaltene stark polierte Streifen an dem Hals des Gefäßes mit dem Übergang zu dem fein gerauten Körper; D - gut erhaltene Polierung mit den sichtbaren ziemlich groben horizontalen Spuren nach dem Polieren, die Typisch für das Material aus Brandýs nad Labem sind (Foto M. Langová).