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Bronze Age Hillforts in South Bohemia. The Current State of Knowledge

Until now 33 hilltop settlements that might represent Bronze Age hillforts have been registered in South Bohemia. However, only four sites have been distinguished and designated with certainty as Bronze Age fortifications through modern archaeological excavations. As for the other sites, the probability is smaller. The main chronological horizons of the preference for hillforts are the turn of the Early to the Middle Bronze Age (Br A2/B1–B1; c. 1800–1500 BC) and the turn of the Late and Final Bronze Age (Ha A2–B1 and Ha B; c. 1050–800 BC). Enclosed areas of rather small dimensions existed throughout the Bronze Age. There are several Bronze Age hillforts, about which we have gained a fairly clear idea about the construction of their fortifications.

Introduction

South Bohemia is a geographically delimited area. The borders were also respected by prehistoric settlements. The rugged landscape, the mosaics of foothills, basins and uplands provided many geomorphological forms, which were suitable for building hilltop enclosure components (**Fig. 1**). Still existing extensive forests in the area have preserved the relics of some prehistoric fortifications. In the study area, a relatively large number of the sites has been preserved. With varying levels of certainty, some of them are dated back to the Bronze Age. Although the main interest in South Bohemian hillforts began in the 19th century, the interest is growing more and more intensive now. However, general knowledge about them is still not satisfactory. The main aim of this work is to introduce the current state of research and the materials of the Bronze Age hillforts in South Bohemia. A historical synthesis and explanations of reasons for the increase, use and decline of the sites are not part of this study. This is a pilot study for the postdoctoral project on the same subject, in which field activities and mainly theoretical studies will be developed further.

The History of Research on Hillforts

From written sources the regional place names associated with fortifications are proof that the South Bohemian hillforts were certainly known

in the Middle Ages. Prehistoric fortifications were denoted on maps of the wider area in 18th century (Brloh and Hluboká nad Vltavou–Baba).¹ The first professional interest in them appeared during the second half of the 19th century, when many hillforts there were registered. The first geodetic plans and excavations of sites were implemented at that time.² B. Dubský, an important South Bohemian archaeologist of the first half of the 20th century, explored many hillforts (including the Bronze Age ones) and conducted relatively small-scale excavations.³

Professional archaeologists began their work in South Bohemia during the second half of the 20th century. Their work was also concerned with improvement of research on hillforts. A. Beneš led systematic excavations on the hillfort of Vrcovice⁴ and rescue excavations in Bechyně. He also carried out the reconnaissance of all hillforts that were known at that time. J. Poláček carried out long-term research on the hillfort of Křemže–Dívčí kámen;⁵ he also directed small-scale excavations in Chřešovice, Skočice and Třebanice. A problem connected with his excavations concerns the insufficient documentation and publication. Two stratigraphic sections of a fortification and many trenches were realized by L. Smejtek in Voltýřov in

¹ Chvojka *et al.* 2013b, 147.

² E.g. Woldřich 1883.

³ Dubský 1949.

⁴ Beneš 1966; Hlášek *et al.* 2015a.

⁵ Poláček 1966.



Fig. 1 Localization of South Bohemia within Europe (map by the author)

the 1980s.⁶ At the end of the 20th century, rescue excavations on hilltop sites began to appear on a large scale, e.g. in Bechyně,⁷ Český Krumlov,⁸ Hradiště u Písku,⁹ Nevězice,¹⁰ Strakonice¹¹ and Všemyslice.¹² At the turn of the millennia, the interest in these Bronze Age sites intensified, especially thanks to P. Hrubý.¹³ The beginning of the new millennium was marked by the creation of digital models of

the terrain of hillforts from the collection of data by total stations. At the same time, metal detectors were finally used by archaeologists, e.g. in Hluboká nad Vltavou,¹⁴ Dobřejovice,¹⁵ and Opalice.¹⁶ Nowadays, hillforts are documented by airborne laser scanning, which is available all over the Czech Republic.¹⁷ New publications of the hillforts are also usually associated with trial trenches (e.g. Brloh, Týn nad Vltavou and Skočice).

⁶ Smejtek 2003a.

⁷ Militký 1996; Krajíc 2007.

⁸ Ernée/Militký 1996.

⁹ Braun 1982.

¹⁰ Drda 1987.

¹¹ Michálek 2008.

¹² Jiráň 1985.

¹³ See Havlice/Hrubý 2002; Hrubý/Chvojka 2002; 2007.

¹⁴ Chvojka/John 2006.

¹⁵ Chvojka *et al.* 2008.

¹⁶ Chvojka/John 2009.

¹⁷ The LiDAR data used in this work was provided by the Czech Office of Land Surveying and Cadastre (www.cuzk.cz).

In recent years the author of this article performed several research projects concerning hillforts in South Bohemia (Vrcovice,¹⁸ Všemyslice¹⁹ and Milenovice). He carried out his excavations using the same methodology, with emphasis on multidisciplinary research, on minimal damage to intact archaeological situations, and on the maximum gain of information. The main goal of his research was to clarify the following: the construction and manner of termination of fortifications, the character of the use of the enclosed area, the subsistence activities of its users, the natural environment of hillforts, and the dating.

Hillforts: Definition, Transformation and Classifications

In this study Bronze Age hillforts are understood as sites on elevated, geomorphologically suitable places, which were enclosed by stable fortifications built in the Bronze Age. In the South Bohemia region, we do not know of any Bronze Age enclosures that are located in lowland areas. We consider fragments of pottery or debris from other settlement activities as sufficient proof of the residential use of hillforts. On the other hand, isolated finds of metal objects are not considered as evidence for the (intensive) settlement of an area. Such sites are not included in this work (e.g. Litoradlice).²⁰ Although we have many preserved hillforts (mostly in forest environments), there is a problem with their chronological classification. Basically, it is impossible to classify them without some professional archaeological research. The determination of the age of fortifications basing only on a few unstratified finds from enclosed areas is questionable, especially in the case of multi-period sites. The problems associated with identifying and dating potential fortified hilltop settlements are frequent.²¹

There are also sites whose position or finds fully correspond to certain hillforts, but they have no fortifications (in the preserved terrain). Some fortifications were dismantled later to gain building material (Hradiště u Písku), some were destroyed by later development (e.g. Český Krumlov, Bechyně,

Křemže, etc.), or they disappeared in different ways. In some cases these sites did not have to be fortified at all. Considering these consequences, we can divide potential hillforts into four categories – according to the probability that they were indeed Bronze Age hillforts:

Type A: Bronze Age sites without preserved fortification. It is possible that some of the sites were not enclosed at all, and this means that such sites are not hillforts (12 sites).

Type B: Bronze Age sites with preserved fortifications, but of unknown age (11 sites).

Type C: Sites with proven settlement only from the Bronze Age, preserved relics and undated fortifications (6 sites).

Type D: Sites with preserved fortifications that undoubtedly date to the period of the Bronze Age (4 sites).

In South Bohemia there are registered 33 sites, but only four of them belong undoubtedly to Type D – definite Bronze Age hillforts (Milenovice, Voltýřov, Vrcovice and Všemyslice; **Fig. 2A**). To extend the list, it is necessary to carry out other targeted archaeological excavations. It is possible to divide the hillforts according to their geomorphology. This division is important for the study of requirements of their prehistoric communities as well as for the predictions of other unknown archaeological sites. The typology of geomorphological types of the South Bohemia hilltop settlements was defined by P. Hrubý²² (**Fig. 2B**):

A. The promontory is a geomorphological feature, which is naturally bordered from three sides by a natural elevation. The comfortable access to the promontory is possible only from one side. In South Bohemia, the promontories are usually formed by watercourses (20 sites).

B. The peak of a hill is a feature with a rounded or flattened top. These hillforts usually have fortifications that run symmetrically around the top (9 sites).

B1. The forepeak of a hill is a reduced platform or a lower peak of a hill. It can be separated from the main peak by a lower saddle (1 site).

C. The ridge is an elongated and narrow geomorphological feature, which is part of some larger massif or a separate hill or a massif with a long axis (2 sites).

¹⁸ Hlásek *et al.* 2014a; 2015a.

¹⁹ Hlásek *et al.* 2015b.

²⁰ Chvojka/Zavřel 2012.

²¹ E.g. Weinberger 2008, 59.

²² E.g. Hrubý/Chvojka 2002, 583–584.

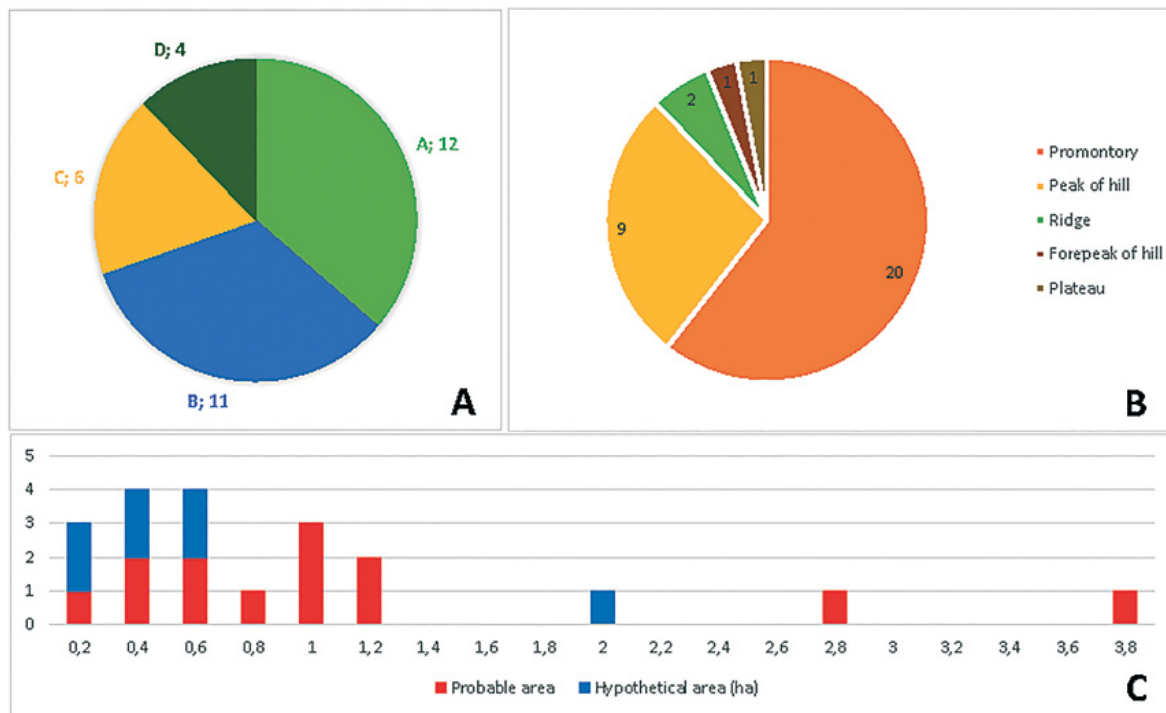


Fig. 2 A Representation of types according to transformation; B morphological types; C histogram of the size of hillforts (graphs by the author)

D. The plateau is a geomorphological feature that usually covers a larger area and is elevated above its surroundings (1 site).

The most important character of hillforts is the size of the enclosed area, which also has a high interpretation potential. To measure the enclosed area is very problematic, so problematic that it was not possible to measure the size of all sites. For this reason we have to take the size data only as an orientation (Fig. 3C). It is evident that in South Bohemia there are no huge hillforts extending over several tens of hectares, as are known in neighbouring regions. On the contrary, there are small enclosed components of an approximate size of up to one hectare. This size is very typical for hillforts dated to the turn of the Early Bronze Age to the Middle Bronze Age. Probably, it is the evidence that smaller communities implemented such fortified settlements.

The state of research does not allow a generalisation of the knowledge about the inner division of fortified areas of hillforts. It is not clear if all of the divisions originate from the Bronze Age. Most hillforts were one-part hillforts without any permanent inner divisions. The hypothesis of a 'transverse rampart' in the area of the hillfort Voltýřov could be excluded through excavation. In Skočice and in Všemyslice the elevated areas are divided from other fortified space by a ditch.

There is a transverse rampart in Hradiště u Písku. The relation of the two neighbouring fortifications in Brloh is unclear.

Chronology

The chronological classification of most sites is based mainly on the typo-chronological analysis of the pottery and metal industry. Most of these finds come from unstratified contexts from the inner fortified areas or from cones of debris on the slopes of hillforts. So far, we have radiocarbon data from only four sites. Nevertheless, these data reflect the main construction periods of the hillforts. The context dated by radiocarbon analysis originates from the beginning of the Middle Bronze Age (Vrcovice and Všemyslice) and at the end of the Bronze Age (Brloh and Voltýřov). In Vrcovice, the first radiocarbon date relates to the construction of walls (1611–1453 BC),²³ and the second date comes from the intact layer in the in-

²³ The calibration of radiocarbon data 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 included.

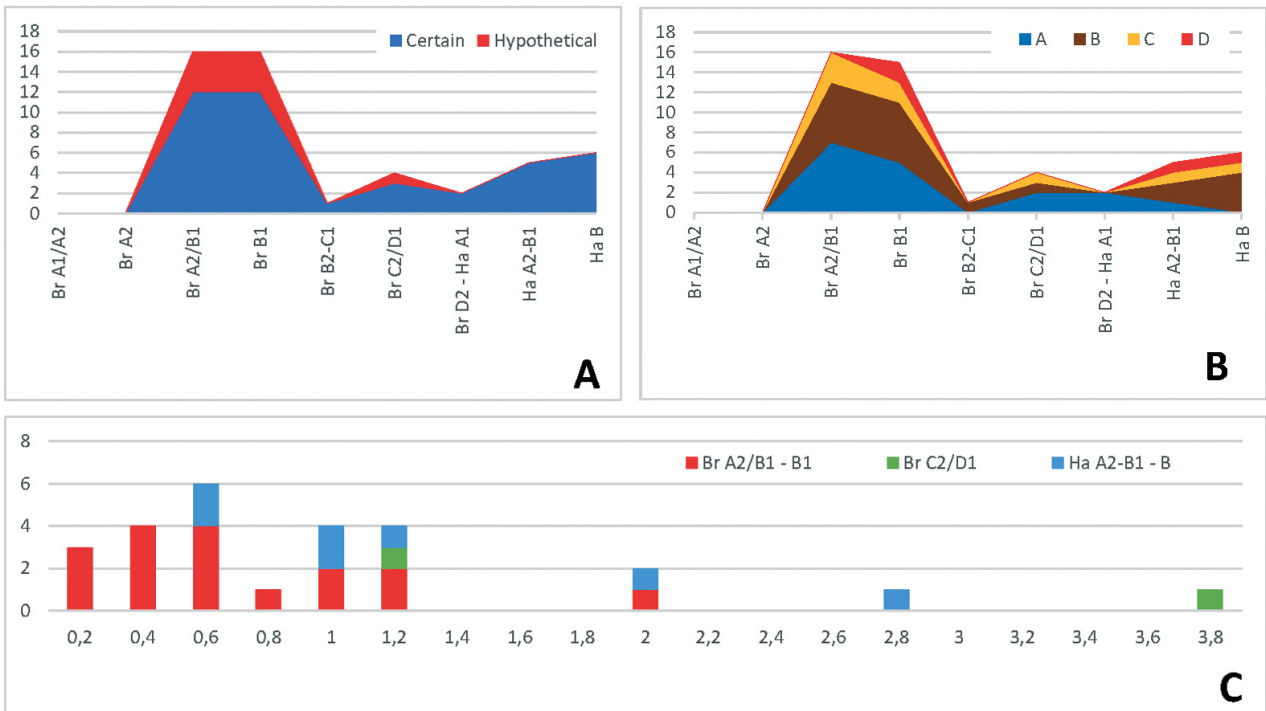


Fig. 3 **A** Representation of types according to chronology; **B** relation between chronology and transformation types; **C** histogram of the size of dated hillforts (graphs by the author)

ner area of the hillfort (1631–1509 BC).²⁴ The first date in Všemyslice is from the base of the destruction at the edge of the acropolis (1731–1614 BC), while the second date is from the intact layer on the acropolis (1607–1446 BC).²⁵ Two radiocarbon data were also taken from the carbonised wooden construction of the older phase of the wall in Voltýřov (1107–814 and 1084–828 BC).²⁶ The last radiocarbon figure is from the layer underneath the clay rampart of the first fortification in Brloh (1010–890 BC). The chronological classification of the rampart is questionable because of its atypical character.²⁷ It is possible to specify the age of the wall in Milenovice. The stratified pottery was produced during the Late Bronze Age (Ha A1/B1). The oldest radiocarbon figure (c. 2000 BC) comes from a hoard found in the hillfort at Opalice, but its connection to the fortification is unclear.²⁸ The other sites are dated only through finds found in context, but without any connection to fortifications. Some data are taken over from older documents and might be incorrect. Finds from some sites are not available, or typologically unclear,

or they were found at a very early time and their present storage place is unknown. For these reasons some sites known in archaeological studies are not included in this work (Boudy, Boletice, Orlík nad Vltavou, Písek, Svatý Ján nad Malší, Vyšný and Záluží).²⁹

The popularity of building hillforts changed during the Bronze Age. There are two main periods (**Fig. 3**). Most of the sites were settled at the turn of the Early Bronze Age to the Middle Bronze Age, which includes two phases (Br A2/B1 and B1). Some sites could have existed during both of these phases (e.g. Bechyně, Chřešřovice, Křemže, Skočice). The other sites (also with proven fortifications) were founded at the beginning of the Middle Bronze Age (Br B1; e.g. Vrcovice, Všemyslice). The next hilltop/fort period appeared at the turn of the Middle Bronze Age and the Late Bronze Age (Br C2/D1), when only four sites were settled. The fortification of the hillfort Hradiště u Písku probably belongs to that period. The second main period is the turn of the Late Bronze Age and the Final Bronze Age; again, there are two phases (Ha A2–B1 and Ha B). The continuity of settlement in the hillforts in these phases has not been proven yet. The Brloh and Milenovice fortifications were probably built at the end of the Late Bronze Age.

²⁴ Hlášek *et al.* 2014a.

²⁵ Hlášek *et al.* 2015b.

²⁶ Smejtek 2003b.

²⁷ Fröhlich *et al.* 2014, tab. 2.

²⁸ Hlášek/Chvojka, in press.

²⁹ See Havlice/Hrubý 2002; Hrubý/Chvojka 2002.

The older phase of the wall in Voltýřov is undoubtedly from the Final Bronze Age. All of the Final Bronze Age hillforts were abandoned before the end of the Bronze Age. There is no continuity into the following Hallstatt period.³⁰

Regional Context: Settlements and Society

Knowledge about the beginning of the Bronze Age in South Bohemia is still very sparse. Aeneolithic finds are very sporadic, and sites of Late Aeneolithic cultures (Corded Ware and Bell Beaker cultures) are missing. The hiatus between radiocarbon dates for the Late Aeneolithic and the first Early Bronze Age dates is more than 500 years. The increase in the exploitation of copper in the Alps and its distribution were probably among the main stimuli for the increase of settlements in South Bohemia. This region, situated in a strategic place between the Alpine mining areas and the main central Bohemia area of the Únětice culture, became a significant transit area of inter-regional importance. The geographical layout of the oldest sites suggests that the initial extent of settlement had apparent links to the South – to the Danube region. After that the extent of settlement gradually expanded towards the North. The principal cultural orientation of the South Bohemian region towards the South also continued during the subsequent phases of the Bronze Age, as is apparent in some metal or pottery elements. The first hillforts were built after the expansion of settlement (Br A2/B1), roughly 300 years after the appearance of Bronze Age innovations.³¹ In South Bohemia the development of Bronze Age settlement continued without a hiatus.

In the course of time, the centre of the extent of settlement moved from the southern to the northern region of South Bohemia. The southern part of the region (districts of Český Krumlov and České Budějovice) was preferred in the Early Bronze Age, while in the northern part settlement is not documented. In the Final Bronze Age the situation became the opposite. Intensive settlements appeared along the Otava and the Vltava rivers, whereas in the southern part settlement was almost absent. This process was probably related to social changes (e.g. changes in the course and

importance of trade routes, respectively changes in orientation to other regional neighbours, exploitation of raw materials, etc.), and for environmental reasons. In the Final Bronze Age there was probably a decline in settlement as is evidenced by the few known sites. Our ideas about the transition to the Hallstatt period are very vague; there is no direct evidence for continuity.

The study of social organization is difficult owing to the state of research on burial sites. Relatively few burial sites have been excavated, and the documentation is often incomplete (e.g. unburned bones were not preserved due to the acidity of the soil). Further, there is also the problem with the reconstruction of find complexes from earlier excavations. For some phases, we do not know of any burial sites at all (by coincidence [?] the burial sites of the main period of hillfort construction are missing). For other phases, the vertical differentiation in society does not seem to be significant. Direct evidence of nobility, as for example in the Hallstatt period, is lacking. But the fortifications around settlements are real proof of the deepening social stratification process and of the growing complexity of settlement hierarchy. However, the small fortified areas are eloquent enough. Bronze Age society in South Bohemia can be considered rather more egalitarian than socially stratified.³²

Fortifications

Fortifications are the main features that are materialized in the hillforts. Some of them have remained preserved until present times in an altered form. Fortifications included walls (ramparts were their transformed forms) and ditches. The best example of the construction of a wall is seen in Vrcovice (**Fig. 4**). The fortification in Vrcovice belongs to the most important sources of information about fortifications dating to the turn of the Early Bronze Age to the Middle Bronze Age in Bohemia. This is because of the preservation of the above-ground relics, the single-phased settlement and the extensive archaeological research that has been conducted at the site. The construction of the inner wall is complicated. The wall itself was delimited on both sides by a stone shell. In front of the outer shell was a berm, which was about one

³⁰ Hrubý/Chvojka 2002, 612.

³¹ Hlášek/Chvojka, in press.

³² See Müller 2015.

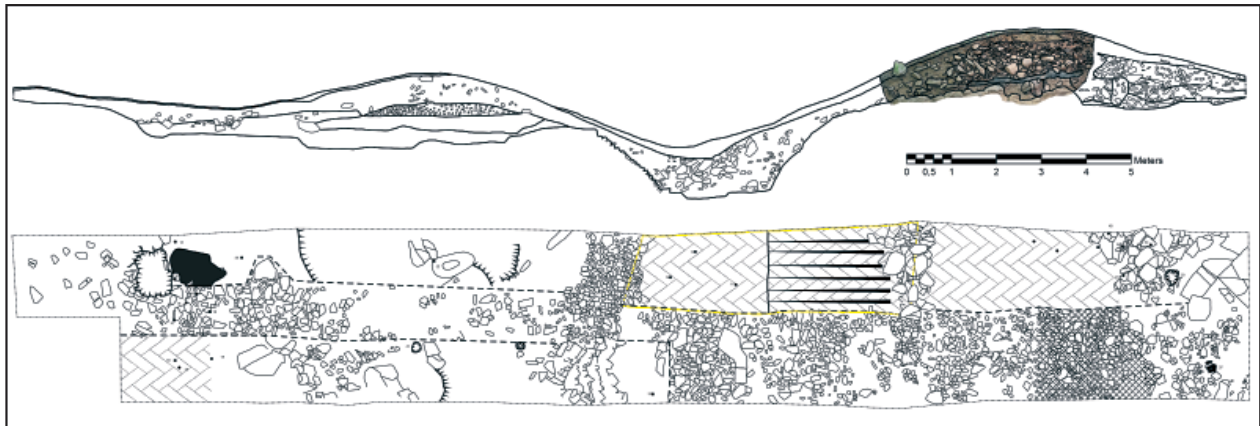


Fig 4 Vrcovice. Cross-section of the fortification (after Hlásek *et al.* 2014a)

meter wide. The bottom part of the outer shell was formed by a row of stones. The basis of the inner shell was likewise formed by a row of large stones. There were also holes for the supporting posts situated behind them. In the interior rampart foundations, the black layer on the overlying rock base was preserved and could be radiocarbon dated. As a result, this layer can be considered the remains of burned pine grade. The rampart armature itself was formed of stones with a minimum portion of soil. The original internal timber construction (later destroyed by fire) was proven by the measurement of its magnetic susceptibility. Oak charcoals can be considered the remains of the timber rampart construction. Abundant daub with impressions found on the destroyed rampart on the inner slope of the wall implies that the upper part of the rampart was formed by a wicker frame, which was precisely covered with clay. To provide longer life of the fill, the wicker frame must have been roofed. The outer rampart was formed by two supportive parallel palisades with irregularly placed poles. The inner space between the palisades (about 2.5 m) was filled with loose earthen material.³³

Archaeologists have long believed that a very similar situation was excavated in Všemyslice, which is chronologically coeval with Vrcovice (Fig. 5). In 1983 L. Jiráň carried out a cross-section trench in the edge of the acropolis. He presupposed that it was a low rampart.³⁴ There was an incentive for new archaeological research in 2014, which was influenced by the fact that the acropolis had been recently disturbed: the place of the former excavation trench from 1983 had

been used as a shelter. The disturbance revealed some complicated stratigraphy, which had been documented earlier, as well as many new finds. The trench provided results, which however, did not enable a reconstruction of the original shape of the construction. There are some indications of complicated architecture, such as stone elements and the wood-clay construction. The construction was destroyed by fire; this fact was proven by the magnetic susceptibility in two horizons. The construction was built after the place had been settled, because there are prehistoric finds in a few layers. The current state of knowledge does not allow a clear interpretation of the destruction documented at the edge of the acropolis as being the remains of the fortification.³⁵

The next example of the construction of the wall is in the Late Bronze Age hillfort of Milenovice. Excavation was carried out there in 2016 (Fig. 6). The rampart, probably the base of the previous wall, is 6 m wide and built of stones with some wooden elements. There are postholes and a stone facing of timber, which represents the remains of the wooden construction. No evidence of fire was found there. The wall itself was built in the Late Bronze Age, which was proven by stratified finds. Radiocarbon dates are still not available (unpublished). Further, the age of the rampart of the first fortification in Brloh is unknown, but there is one Late/Final Bronze Age radiocarbon date from the layer under the rampart. However, the clay structure of the rampart is atypical, and the shape of the fortification might also be associated with modern times.³⁶

³³ Hlásek *et al.* 2014a; 2015a.

³⁴ Jiráň 1985; Alušík 2012; Hlásek *et al.* 2014b.

³⁵ Hlásek *et al.* 2015b.

³⁶ Fröhlich *et al.* 2014.

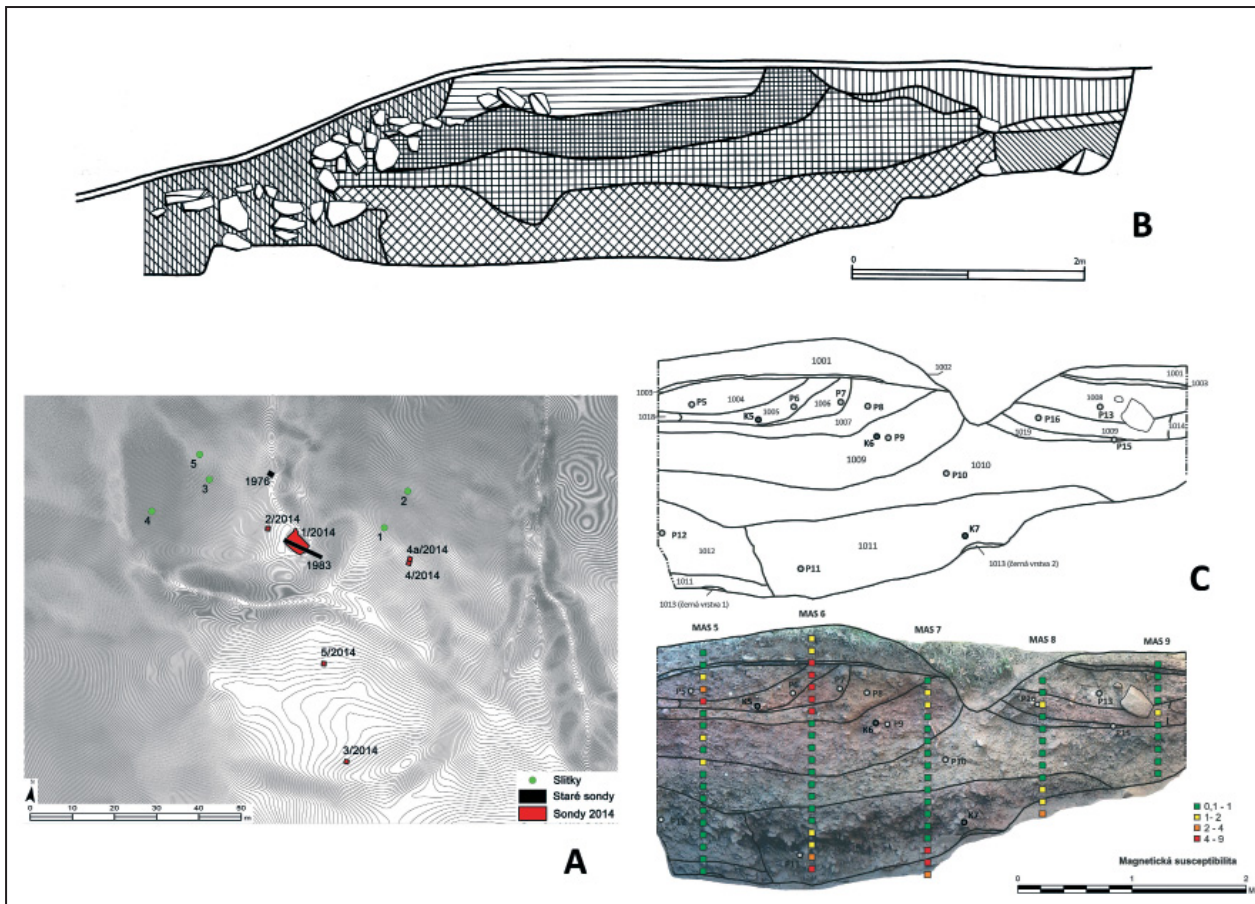


Fig. 5 Všemyslice. A Map of the site; B cross-section of the edge of acropolis made by L. Jiráň; C cross-section of the edge of acropolis made by author (A after Hlásek *et al.* 2015b; B after Hlásek *et al.* 2014b; C after Hlásek *et al.* 2015b)

Two phases of the Final Bronze Age wall have been registered in Voltýřov. The oldest wall was made of wood and clay with an outer stone facing built of huge stones; the wall was finally destroyed by fire. A radiocarbon date was obtained from the carbonized oak construction; it was built approximately in the 10th century BC. On the ruins of the first wall was built a new stone and clay wall, which has both an inner and an outer stone facing.³⁷

We also have reports about older excavations of fortification hillforts that cannot be classified with certainty as Bronze Age structures. Layers of large stones and sandy clay material were uncovered in the rampart in Dobřejovice in 1890.³⁸ The ramparts in Hluboká nad Vltavou and in Hradiště u Písku are constructed of stones, too.³⁹ In Skočice, J. Poláček noted that the stony rampart in the foreground had a stone shell with clay filling.⁴⁰

It may be possible to define a specific group of promontory hillforts on the basis of the typically very high and relatively short rampart (wall) of the Early Bronze Age. Unfortunately, the chronological classification of these hillforts is not precise. They are known in Opalice (Fig. 9,5), Týn nad Vltavou (Fig. 10,3) and perhaps in Velešín. In every case, hillforts of this group are located upon a promontory, and they have a stone rampart partition, one narrow side for access, and ditches in front of ramparts. The difference in altitude between the top of the rampart and the bottom of the (filled) ditch in Týn nad Vltavou is 6 m; in Opalice it is also 6 m, and in Velešín about 4 m. Hypothetically, the rampart Velešín is considered to be ruins of a medieval castle “Kamenná věž” (“Stone Tower”); however, no medieval wall was found there during archaeological excavations. Medieval pottery was found only in surface layers. The rampart is made of stones, and a burnt layer was registered there as well.

The second characteristic feature of fortifications is the ditch. Ditches are often preserved in the terrain, although they are usually partially filled.

³⁷ Smejtek 2003a; 2003b.

³⁸ Woldřich 1893, 9–10.

³⁹ Dubský 1949, 125–126, 143.

⁴⁰ Chvojka *et al.* 2013a, 26 Fig. 3–4.

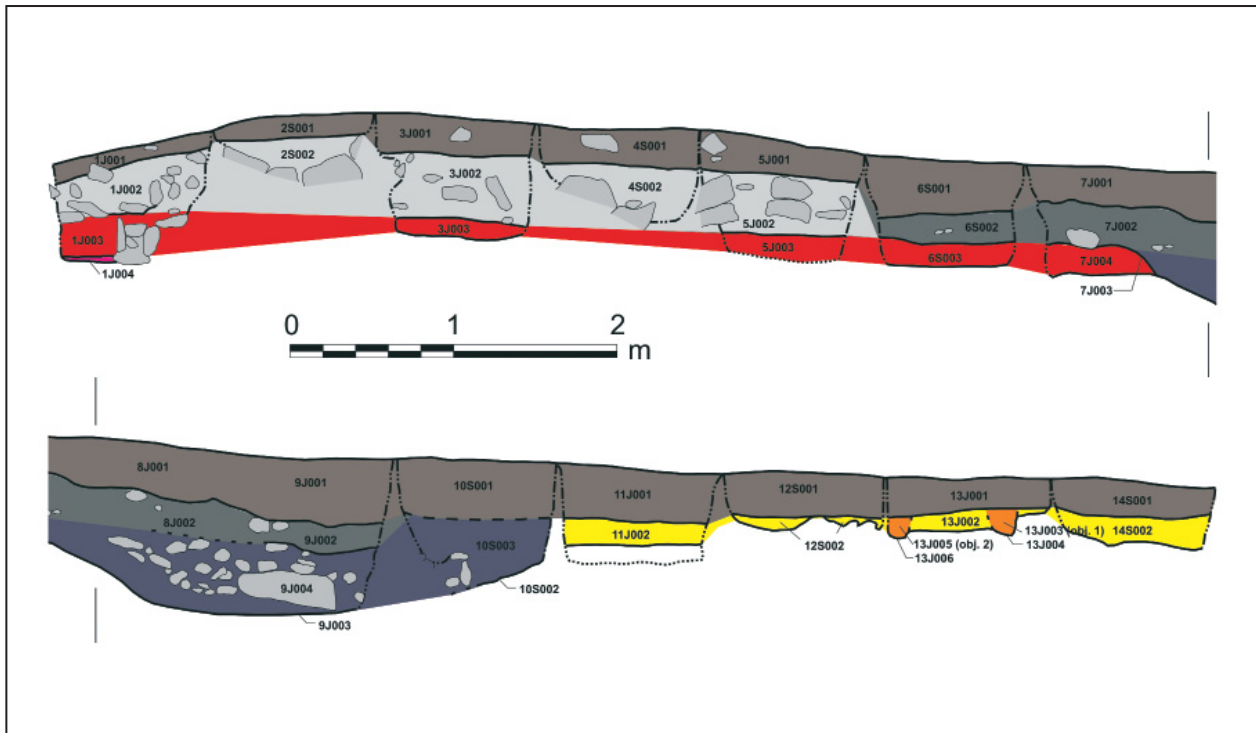


Fig. 6 Milenovice. Cross-section of the fortification (drawing by the author)

Archaeologically examined ditches are present in Vrcovice (Fig. 4) and in Milenovice (Fig. 6). The ditch in Vrcovice with its sloping sides and flat bottom was carved into the rocky ground between the inner and the outer wall. In the cross-section, the width of the upper part of the ditch was 6.5 m; the width of the bottom of the ditch was about 2.5 m; the depth of ditch in the presumed original terrain was about 2 m. In Milenovice, the relatively shallow ditch was approximately 3 m wide and its depth only 1 m in the contemporary terrain. The ditch was partly covered with the debris from the stone wall. Some fragments of Late Bronze Age pottery were found at the bottom of the ditch. We date the entire fortification to the Late Bronze Age period. Ditches are always situated in front of ramparts; in the case of more than one wall, ditches are present between them. Material from the ditches was probably used for building adjacent walls.

There are also groundplan structures of fortifications. The usual promontory hillforts have preserved fortifications only on access sides. The question is whether this corresponds to the original situation. It is also possible that the rest of the hypothetical circumferential fortifications on the edges of slopes might have completely disappeared due to erosion.

Similar hillforts are also documented in Dobřejovice (Fig. 8,4) and in Třebanice (Fig. 10,2).

These sites are situated on the elongated peaks of hills, and they are enclosed by circumferential fortifications. Although the specific semi-circular fortification of the hillfort Hluboká nad Vltavou does not have analogies in South Bohemia, formally similar Early Bronze Age sites are known in Moravia, Slovakia and Hungary.⁴¹ Probably, the fortification in Hluboká nad Vltavou originated in the Early Bronze Age, too. Its arrangement can be considered as an import of ideas.⁴²

Relatively little is known about the “life span” of South Bohemian fortifications in the past. The chronological analyses suggest that any securely dated wall did not exceed one typological phase (circa 150 years). Their lifetime was probably even shorter. We only have evidence for a repaired wall and that was in Voltýřov. However, it is not entirely certain that the younger phase of wall is from the Final Bronze Age, too. Traces of fire were often found during excavations of ramparts. Fire was certainly the cause of the destruction of fortifications. Examples of hillforts destroyed by fire are Hradiště u Písku, Velešín, Vrcovice and Všemyšlice. Most information about the destruction

⁴¹ E.g. Hlatavá *et al.* 2015, 199–213 Fig. 3; Batora *et al.* 2015, 123–138 Fig. 1; Kovárník 2015, 105–122 Fig. 11–13.

⁴² Chvojka *et al.* 2017, 141–143 Fig. 6.

of inner walls is found in Vrcovice. The wall was destroyed by fire, and the maximum burning temperature varied. Some stones were nearly molten through the intense temperature of the fire. The rampart collapsed mainly towards the settlement area, probably because of the loosening of the internal load-bearing poles. The direction of the slide of the inner rampart is evidenced by the boundary of the rampart destruction, which was captured in the trench situated at the inner foot of the wall, and by the noticeably askew position of the stones of the exterior shell. The determination of the position in which the selected stones moved during fire is based on the measurement of conserved magnetism.⁴³

Evidence for Subsistence Strategies and Warfare

Especially new research on hillforts has provided remains of agriculture in the form of plant macroremains and of the consumption of bred animals.⁴⁴ The spectrum of consumed plants and animals is very similar to that in contemporary lowland settlements. There is a lack of information about other activities. The production of textile is documented by finds of loom weights (e.g. in Skočice, Vrcovice, Všemyslice, Oslov) and whorls (in Všemyslice). The traditional theory about hillforts as being centres of metallurgy in Bohemia is rejected.⁴⁵ Yet, the evidence for metallurgy in the examined sites is scarce: the mould for a dagger was found in Skočice,⁴⁶ the fragment of a nozzle was recently found in Velešín (unpublished), and finds of copper ingots are relatively frequent (in Albrechtice, Všemyslice and Nuzice).

We believe in the connection between the hillforts and the exploitation of typical South Bohemian mineral resources, such as gold or graphite. These materials were probably used in South Bohemia throughout the entire Bronze Age. However, we do not have any direct proof of regional prehistoric exploitations. The use of gold is documented by the find of a gold hair ring in Vrcovice. Some hillforts are found close to later (medieval

or post-medieval) mining areas of primary or secondary deposits of gold (e.g. in Albrechtice nad Vltavou, Bechyně, Skočice, Voltýřov, Vrcovice and Všemyslice). Graphite occurs at the examined sites as raw material (in Křemže, Milenovice, Oslov) and above all as the application on the surface of pottery during the entire Bronze Age. Further, graphite deposits are closely related to some hillforts, for example in Opalice: there is a vein of graphite in the site. Other sites are situated in their proximity.

Gold and graphite could also have been important trade articles. Trade was a very important aspect of the Bronze Age, and hillforts were probably integral parts of the trade network.⁴⁷ A large number of South Bohemian hillforts are positioned on major natural routes.⁴⁸ Their deployment within the region indicates the main interregional trade orientation of the population: the South-North axis is closely linked with the Vltava River at the turn of the Early Bronze Age to the Middle Bronze Age;⁴⁹ at the end of the Bronze Age there was an obvious connection along the Otava River with West Bohemia and South Bavaria (in Brloh, Katoovice, Velké Hydčice–Prácheň; **Fig. 7B**).⁵⁰ The bread-loaf idol (*Brotlaibidol*) found in the Bechyně hillfort was undoubtedly associated with the trade.⁵¹ The most striking import found in South Bohemian hillforts is a large set of amber beads found in Křemže-Dívčí Kámen.⁵² Other archaeologically visible imports are some artefact types of the bronze industry or raw copper and tin, or artefacts of the chipped stone industry.

The traditional interpretation of prehistoric hillforts is connected with their defensive function in warfare.⁵³ However, some opinions about their exclusively symbolic purpose have appeared recently.⁵⁴ Generally speaking, the evidence of prehistoric warfare is ambiguous. Because of acid soils in South Bohemia, unburned human bones are usually not preserved, and bones could have been important evidence for warfare. The first main period of building hillforts could be an indication of dangerous times: the turn of the Early

⁴³ Hlášek *et al.* 2014a.

⁴⁴ Hlášek *et al.* 2014a; 2015b.

⁴⁵ Blažek *et al.* 1998, 34.

⁴⁶ Militký 1995.

⁴⁷ Neustupný 2006.

⁴⁸ Hrubý/Chvojka 2007; Chvojka 2015.

⁴⁹ Hlášek 2017.

⁵⁰ Hrubý/Chvojka 2002, 612.

⁵¹ Krajč 2007 Fig. 47; Chvojka *et al.* 2011a, Fig. 6,3.

⁵² Poláček 1966 Fig. VIII; Chvojka *et al.* 2017 Fig. 6 D.

⁵³ Osgood *et al.* 2000.

⁵⁴ Cf. Armit 2007.

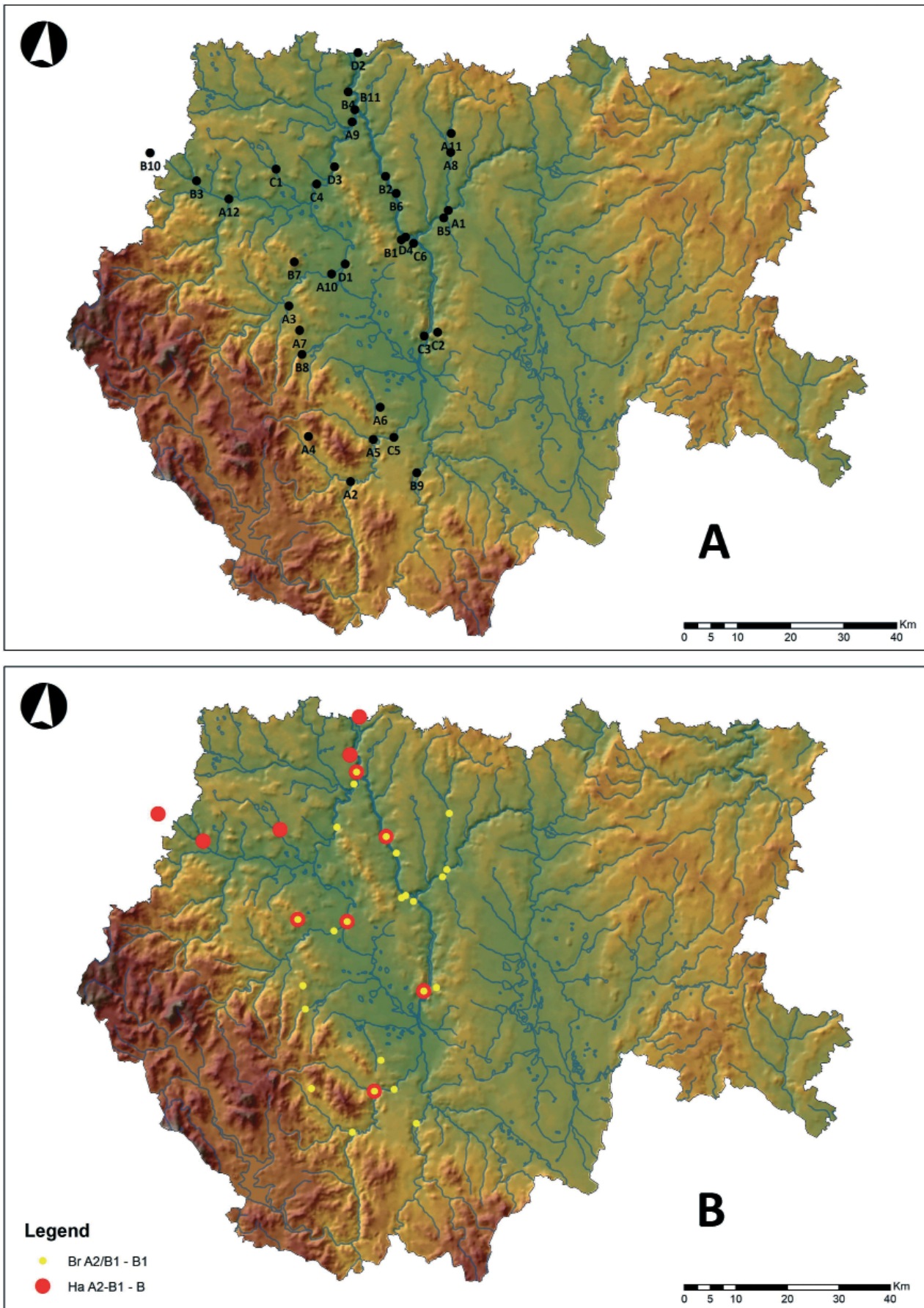


Fig. 7 Maps of South Bohemian hillforts. Labels refer to the catalogue of sites (maps by the author)

and Middle Bronze Age when the first swords and spearheads arrived in Central Europe.⁵⁵ For instance, one of the oldest spearheads comes from the hillfort in Dobřejovice.⁵⁶ As already mentioned above, many fortifications were destroyed by fire, which is also associated with the violent extinction of fortifications. The reasons for fires may be different; they were not necessarily related to warfare.⁵⁷ What is more, in some hillforts there may not have been any conflicts, despite the fact that the expectation of conflict could have been the main reason for building hillforts. Artefacts that are interpreted as weapons are relatively rare in hillforts. Only finds of miniature triangular daggers are common (in Albrechtice nad Vltavou, Dobřejovice, Křemže, Skočice). These rather symbolic weapons could be considered attributes of rank.⁵⁸ Finds of spearheads are also known (e.g. in Dobřejovice, Zvíkovské Podhradí). It is obvious that many metal artefacts, including Bronze Age weapons, have disappeared due to illegal metal-detecting activities. In conclusion, the set of small stones in Chřešřovice, Hradiště u Písku, Křemže or Voltýřov might be considered as hoards of sling-stones.⁵⁹

Conclusion

The relics of the Bronze Age fortifications are the oldest preserved monumental architecture in South Bohemia. However, the quality of research is not satisfactory; therefore, it can influence the possibilities of their interpretation. The main time horizons of preference for hillforts are the same as in the surrounding regions. This is evidence for activities that are closely related with the more general Bronze Age social system. South Bohemian hillforts can be regarded as areas of collective communities, whose portable artefacts do not differ from those common to agricultural settlements. Yet, we are not able to consider their mutual hierarchy because of their similar archaeological picture. We suppose that individual hillforts had only local importance; however, they were part of the large-scale European network of simi-

lar sites. No South Bohemian hillfort displays aspects of having been an interregional central site. Their purpose is still unclear. We must work with wide scale of interpretation, which can include areas of military functions, social-economic roles, and places of symbolic or religious significance.

Catalogue of Sites (Figs. 8-10)

Type A

A1 Bechyně (Fig. 8,2)

Geomorphology: promontory.

BA period(s): A2/B1 – Br B1, Br D2-Ha A1; Other period(s): Hallstatt period, La Tène culture, Middle Ages – present day.

Excavations: 1975 (T. Durdík), 1976 (A. Beneš, P. Braun), 1987 (J. Militký), 2006 (R. Krajíc); ETRS89: B=49°17'27"; L=14°28'03".

The hypothetical fortification was covered by later medieval buildings. Registered there was a thick layer dated to the end of the Early Bronze Age, which is situated in the area of the current chateau. The most significant find is the fragment of the loaf idol (*Brotlaibidol*). It is only the second known exemplar found in South Bohemia.

Hypothetical area: 0.2 ha.

Ref.: Militký 1993; 1996; Krajíc 2007; Chvojka *et al.* 2011a.

A2 Český Krumlov

Geomorphology: promontory.

BA period(s): Br B1; Other period(s): Hallstatt period, La Tène culture, Middle Ages – present day.

Excavations: 1994-1995 (M. Ernée).

ETRS89: B=48°48'46"; L=14°18'52".

The potential hillfort was constructed at the beginning of the South Bohemia Bronze Age; it is situated on a promontory in Český Krumlov. The place was also used for building the medieval castle, which was rebuilt later to the famous chateau. Hypothetical relics of fortifications are covered by later developments. During the small excavation only a limited number of prehistoric finds was recovered.

Hypothetical area: 0.5 ha.

Ref.: Ernée/Militký 1996.

A3 Čichtice-Hnojnice

Geomorphology: forepeak of hill.

BA period(s): Br C2/D1; Other period(s): –.

⁵⁵ See S. Hansen in this volume.

⁵⁶ Chvojka *et al.* 2008 Fig. 5,7.

⁵⁷ O'Brien *et al.* 2018, 75–76.

⁵⁸ Weinberger 2008, 55.

⁵⁹ Cf. Robertson 2016, 4–25 Fig. 2.

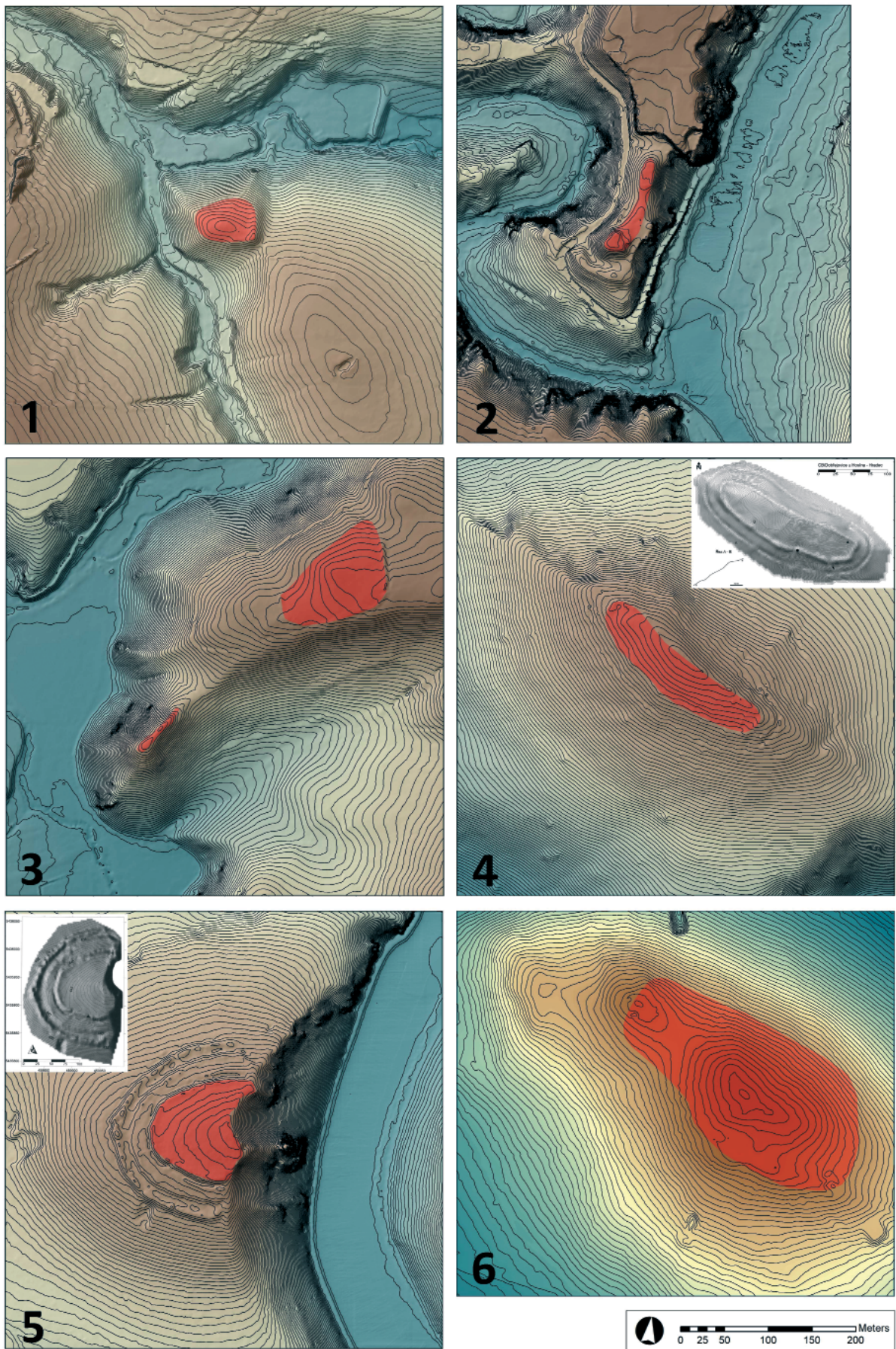


Fig. 8 Plans of South Bohemian hillforts made by airborne laser scanning (ALS): **1** Albrechtice nad Vltavou; **2** Bechyně; **3** Brloh; **4** Dobřejovice; **5** Hluboká nad Vltavou; **6** Hradiště u Písku (ALS plans by the author; 4 other plan after Chvojka *et al.* 2008; 5 other plan after Chvojka/John 2006)

Excavations: (only surface-artefact survey).
ETRS89: B=49°05'35"; L=14°05'36".

The site is situated on a dominant hill. Finds come only from the southeast forepeak of the hill. Relics of fortifications have not been identified in the terrain. However, they are mentioned in regional place names (Pod hradci – “Under hillforts”, Na příkopech – “On the ditches”).
Ref.: Parkman 2004 Figs. 7–9.

A4 Chvalšiny–Mlýnské vrchy

Geomorphology: ridge.

BA period(s): Br A2/B1; Other period(s): –.

Excavations: (only surface-artefact survey and trial trenches).

ETRS89: B=48°52'43"; L=14°11'25".

Only pottery has been found on the peak of the hill (814 m asl) and on the adjacent ridge. It is the highest placed site constructed at the beginning of the Bronze Age in South Bohemia. From the top of the hill there is a very good view over both river valleys. The site is linked to the control of trade routes across the Bohemian Forest.

Ref.: Fröhlich/Parkman 2003.

A5 Křemže–Dívčí kámen (Fig. 9,2)

Geomorphology: promontory.

BA period(s): Br A2/B1, Br B1, Ha A2–B1; Other period(s): Hallstatt period, La Tène culture, Middle Ages.

Excavations: 1962–1971 (J. Poláček).

ETRS89: B=48°53'21"; L=14°21'25".

The site was excavated in 1960s. Unfortunately, most of the intact situations of the site were destroyed by the construction of the medieval castle. However, a lot of archaeological material, including the bronze and stone industries from the turn of the Early Bronze Age and the Middle Bronze Age were found in secondary positions of the slopes. One very important find is the hoard of amber beads. The prehistoric fortification has not dependably confirmed.

Hypothetical area: 0.5 ha.

Ref.: Poláček 1966; Chvojka 2004.

A6 Lipí–Travní cesty

Geomorphology: plateau.

BA period(s): Br B1; Other period(s): Ha D/La Tène A.

Excavations: (only surface-artefact survey).

ETRS89: B=48°56'48"; L=14°21'44".

The finds were found in the field on the plateau. No traces of fortifications have been registered.

Ref.: Zavřel 2001.

A7 Obora u Hracholusk

Geomorphology: ridge.

BA period(s): Br A2/B1; Other period(s): –.

Excavations: 2003 (M. Parkman).

ETRS89: B=49°03'18"; L=14°07'54".

Many finds of fragmented pottery have proven the intensive usage of the area. Indisputable relics of fortifications were not registered.

Ref.: Parkman 2004.

A8 Opařany

Geomorphology: promontory.

BA period(s): Br A2/B1; Other period(s): Hallstatt period.

Excavations: (only surface-artefact survey and trial trenches).

ETRS89: B=49°23'22"; L=14°27'12".

The significant promontory formed at the confluence of two streams. Prehistoric finds come from the top platform. A sizable part of the promontory was disturbed by the local quarry.

Ref.: Chvojka *et al.* 2011b.

A9 Oslov

Geomorphology: promontory.

BA period(s): Br A2/B1; Other period(s): Middle Ages – present day.

Excavations: 2017 (D. Hlášek).

ETRS89: B=49°25'02"; L=14°11'21".

The long promontory is above the Otava River. The prominent feature of the place was diminished by the Orlík dam. No traces of fortifications are perceptible. Suitable places have been destroyed by recent developments and a road.

Ref.: unpublished

A10 Radčice-Vrch Kulovatý

Geomorphology: peak of hill.

BA period(s): Br A2/B1–B1; Other period(s): La Tène culture.

Excavations: 1996 (J. Michálek).

ETRS89: B=49°09'26"; L=14°11'29".

The dominant hill juts above the Budějovice Basin. The area has been disturbed by terracing and quarries.

Ref.: Michálek 2000; Chvojka/Michálek 2004.

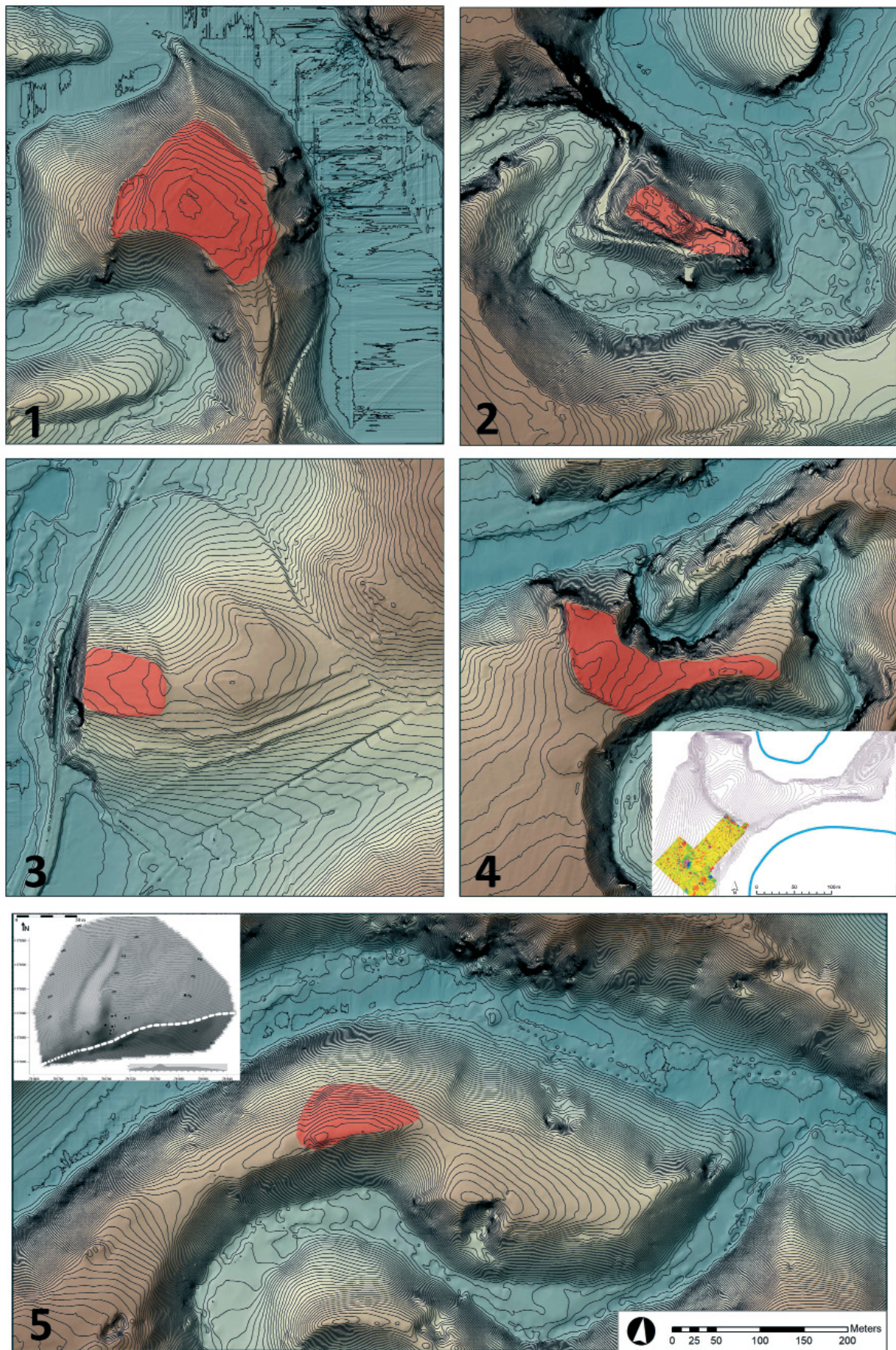


Fig. 9 Plans of South Bohemian hillforts made by airborne laser scanning (ALS): 1 Chřešovice; 2 Křemže; 3 Milenovice; 4 Nuzice; 5 Opalice (ALS plans by the author; 4 other plan after Chvojka *et al.* 2010; 5 other plan after Chvojka/John 2009)

A11 Sepekov–Chlum

Geomorphology: peak of hill.

BA period(s): Br D–Ha A; Other period(s): –.

Excavations: (only surface-artefact survey and trial trenches).

ETRS89: B=49°25'16"; L=14°26'55".

A bronze axe and a set of fragmented pottery were found on the site. The hill is rich in mineral resources: graphite, milk opal (material used for chipped industry) and gold, but there is no evidence for prehistoric exploitation. Chronologically synchronic burial mounds are situated not far from there.

Ref.: Fröhlich/Chvojka 2003.

A12 Strakonice–Hrad

Geomorphology: promontory.

BA period(s): Br C2/D1; Other period(s): Aeneolithic, Hallstatt period, Middle Ages to present-day.

Excavations: 1937 (B. Dubský), 1975–1976 (A. Hejna), 1977, 1982 (J. Michálek), 2006 (K. Kašák, J. Valkony).

ETRS89: B=49°15'29"; L=13°54'06".

The site is situated above the confluence of the Otava and the Volyňka rivers. The area has been destroyed by the medieval castle. Prehistoric finds were found in secondary position.

Ref.: Michálek 2008.

Type B**B1 Albrechtice nad Vltavou (Fig. 8,1)**

Geomorphology: promontory.

BA period(s): Br A2/B1, Br B1; Other period(s): Middle Ages.

Excavations: 2003 (J. Havlice).

ETRS89: B=49°13'51"; L=14°21'27".

Fortification: the arched rampart (preserved in the length of 40 m) and the outer ditch are situated on the accessible (SE) side.

Area: 0.2 ha.

This small promontory hillfort is one of three (the others are Týn nad Vltavou and Všemyslice) in the close hinterland of the inter-regionally important Early Bronze Age settlement Hosty.

Ref.: Havlice 2004.

B2 Chřešřovice–Sv. Jan (Fig. 9,1)

Geomorphology: promontory.

BA period(s): Br A2/B1, Br B1, Ha A2–B1; Other period(s): Hallstatt period, Early Middle Ages – present day (cemetery).

Excavations: 1928–1929 (B. Dubský), 1963–1965, 1975 (J. Poláček).

ETRS89: B=49°20'01" L=14°17'44"

Fortification: the undated double rampart and a ditch are preserved on the NW side. Three lines of fortification on the access side are mentioned in older literature, but today are not noticeable. Area: 2 ha (?).

A dominant kidney-shaped promontory. Comfortable access is possible only from the narrow ridge in the south. The site was elevated c. 80 m above the river Vltava before the construction of Orlík dam. Many finds, mostly from the Bronze Age, come from excavations and the surface-artefact survey.

Ref.: Dubský 1949; Fröhlich 1997; Chvojka 2009.

B3 Katovice–Kněží hora

Geomorphology: peak of hill.

BA period(s): Ha B; Other period(s): Aeneolithic, Early Middle Ages.

Excavations: 1946 (B. Dubský), 2016–2017 (V. Král, P. Menšík)

ETRS89: B=49°16'52"; L=13°48'39".

Fortification: The preserved fortification is undoubtedly from the Early Medieval period.

Located there is a large Early Medieval hillfort. A small assemblage of the Final Bronze Age pottery was found on the top of the hill during excavations.

Ref.: Dubský 1949; Menšík/Král 2017.

B4 Nevězice

Geomorphology: promontory.

BA period(s): Ha B; Other period(s): La Tène culture.

Excavations: 1948 (B. Dubský), 1948 (J. Maličský), 1949–1951 (B. Svoboda), 1980 (P. Drda)

ETRS89: B=49°28'05"; L=14°10'03".

Fortification: Located there is a preserved fortification, undoubtedly of the La Tène period. However, excavations in the NW corner of the fortification have uncovered part of the Final Bronze Age palisade trench.

The site is known as a La Tène *oppidum*, but there are also finds from the Bronze Age.

Ref.: Dubský 1949; Drda 1987; Chvojka 2009.

B5 Nuzice (Fig. 9,4)

Geomorphology: promontory.

BA period(s): Br A2/B1–B1 (?); Other period(s): Middle Ages.

Excavations: (only surface-artefact survey).

ETRS89: B=49°16'39"; L=14°27'35".

Fortification: The curve-shaped rampart (130 m long) separates the entire promontory. A filled ditch was found in front of the rampart through geomagnetic surveys.

Area: 0.5 ha.

The hillfort is situated on a significant promontory, which was shaped by the meander of stream "Židova strouha".

Ref.: Chvojka *et al.* 2010.

B6 Písecká Smoleč

Geomorphology: promontory.

BA period(s): Br A2/B1; Other period(s): Middle Ages.

Excavations: 1919 (J. Švehla), 1940 (B. Dubský).

ETRS89: B=49°18'26"; L=14°19'40".

Fortification: The outer curve-shaped fortification was constructed in the Early Medieval period.

Hypothetical area: 0.4 ha.

The hillfort is situated upon a dominant promontory above the Vltava River. Prehistoric finds were found only on the slopes of the promontory, so it has not been possible to specify the extent of the Bronze Age settlement yet.

Ref.: Hlásek 2017.

B7 Skočice (Fig. 10,1)

Geomorphology: peak of hill.

BA period(s): Br A2/B1, Br C2/D1 (?), Ha B; Other period(s): Hallstatt period, La Tène culture, Early Middle Ages.

Excavations: 1914 (B. Dubský), 1963–1974 (J. Poláček).

ETRS89: B=49°10'06"; L=14°05'30".

Fortification: stone rampart which is the border of the foreground.

Area: 1.1 ha.

The hillfort with prehistoric and Early Medieval finds is located upon a significant hillock near Skočice. This hillfort was formed by a rock elevation called an acropolis and a 330-m long rampart formed by debris of wall. Relics of the fortification have not been dated.

Ref.: Chvojka *et al.* 2013a.

B8 Třebanice–Velký hrádeček (Fig. 10,2)

Geomorphology: peak of hill.

BA period(s): Br A2/B1; Other period(s): Hallstatt period, Early medieval period.

Excavations: 1961 (Poláček), 2001 (Parkman).

ETRS89: B=49°00'55"; L=14°08'43".

Fortification: a circumferential stone rampart (395 m long). The outer ramparts are situated only on the east and southeastern sides.

Area: 0.8 ha.

Multi-period site: most of the finds are connected with the Early Bronze Age. The building of fortifications is typical for all present chronological components. Right angles in the corners of the inner rampart on the east side of the hillfort are atypical for the Bronze Age.

Ref.: Parkman 2003.

B9 Velešín–Kamenná věž

Geomorphology: promontory.

BA period(s): Br A2/B1; Other period(s): Aeneolithic, Hallstatt period, Middle Ages.

Excavations: 1975 (Hejna).

ETRS89: B=48°50'31"; L=14°28'39".

Fortification: Three fortification lines of ramparts and ditches and a huge high rampart.

Hypothetical area: 0.4 ha.

The narrow promontory is elevated above the flooded valley of the Malše River. Early Bronze Age objects were found there in surface-artefact survey. The huge rampart is considered to be the ruin of the medieval castle "Kamenná věž" ("Stone Tower"). No medieval wall has been registered by archaeological excavations. The medieval pottery was found only in the surface layers. The rampart is composed of stone debris; the burnt layer was registered there. It is possible that the huge rampart caused the destruction of the prehistoric, probably Early Bronze Age, wall.

Ref.: Hejna 1985; Ernée 1998.

B10 Velké Hydčice–Prácheň

Geomorphology: peak of hill.

BA period(s): Ha B; Other period(s): Early Middle Ages (hillfort), Middle Ages (castle).

Excavations: 1920 (B. Dubský), 1976 (P. Braun, J. Klápště).

ETRS89: B=49°18'58"; L=13°40'54".

Fortification: preserved relics of fortification belong to the Early Medieval hillfort or to the medieval castle.

Traces of the Final Bronze Age activities were covered over the important Early Medieval hillfort and later medieval castle.

Ref.: Pták/Ptáková 2018.

B11 Zvíkovské Podhradí

Geomorphology: promontory.

BA period(s): Br B1 (?), Br B2–C1, Ha A2–B1; Other period(s): Neolithic, Aeneolithic, Hallstatt period, La Tène culture, Roman period, Middle Ages.

Excavations: 1955 (K. Reichertová), 1956 (A. Hejna), 1959 (L. Jansová), 1973 (J. Michálek).

ETRS89: B=49°26'19"; L=14°11'31".

Fortification: Two undated ramparts and a ditch are situated in the southern access side. A stone facing of the outer rampart was also registered there. Another rampart, probably of La Tène date, was located in the northern part of the hillfort.

The long dominant promontory was shaped by the confluence of two upper South Bohemian rivers: the Otava and the Vltava. This is a multi-period site covering almost all prehistoric periods in South Bohemia. The dominant feature of the site was diminished by the Orlick dam.

Ref.: Dubský 1949; Fröhlich 1997; Chvojka 2009.

Type C

C1 Brloh–Žižkův Vrch (Fig. 8,3)

Geomorphology: promontory.

BA period(s): Ha A2–B1; Other period(s): –.

Excavations: (only surface-artefact survey and trial trenches).

ETRS89: B=49°19'15"; L=14°00'42".

Fortification: 1 – a bank enclosure in the shape of an irregular heptagon; in front of it is a shallow ditch on the access side; 2 – short rampart (15 m long, 1 m high) with a shallow ditch.

Area: 0.9 and 0.1 ha.

There is no clear connection between the two fortifications, which are situated next to each other. The first one has an irregular shape with a rampart and a ditch. The dating of the fortification is very problematic. There is one Final Bronze Age radiocarbon date from the layer under the rampart, but the shape of the fortification can be also connected with modern times. The second fortification, with a rampart and a shallow ditch, is situated on a narrow rocky promontory. The archaeological finds found in this fortification belong solely to the

Final Bronze Age; they probably correspond with the age of the fortification.

Ref.: Fröhlich *et al.* 2014.

C2 Dobřejovice-Hradec (Fig. 8,4)

Geomorphology: peak of hill.

BA period(s): Br A2/B1; Other period(s): –.

Excavations: 1890 (J. N. Woldřich), 1985 (P. Zavřel).

ETRS89: B=49°05'02"; L=14°28'57".

Fortification: Two lines of circumference enclosures are preserved. The inner fortification line is the formation of the stone rampart (480 m long). At a distance of 15–20 m from the inner fortification line is a shallow ditch (600 m long).

Area: 0.9 ha.

The hillfort consists of two lines of fortifications. The inner one is formed by the stone rampart, and the outer and more distant fortification is the ditch. Solely finds from the end of the Early Bronze Age, including bronze industry, were registered there.

Ref.: Woldřich 1883; 1893; Zavřel 1990; Chvojka *et al.* 2008.

C3 Hluboká nad Vltavou-Baba (Fig. 8,5)

Geomorphology: peak of a hill.

BA period(s): Br B1, Ha B; Other period(s): –.

Excavations: 1945 (B. Dubský), 2005 (O. Chvojka, J. John).

ETRS89: B=49°04'29"; L=14°27'05".

Fortification: two semi-circular fortifications consisting of a rampart and a ditch.

Area: 0.9 ha.

One of the most impressive hillforts in South Bohemia is Baba near Hluboká nad Vltavou. The greatest advantage of the hillfort is its position: it is situated in the inaccessible Schwarzenberg deer park. This fact has ensured its good preservation. A few archaeological finds from turn of the Early Bronze Age and the Middle Bronze Age and the Late Bronze Age have been found in the hillfort. The fortification itself was not been explored; however, we suppose there is an association with the Early Bronze Age, in view of many analogies.

Ref.: Chvojka/John 2006.

C4 Hradiště u Písku (Fig. 8,6)

Geomorphology: peak of hill.

BA period(s): Br C2/D1; Other period(s): –.

Excavations: 1923–1924 (A. Krejčí, A. Sedláček), 1946 (B. Dubský), 1979 (P. Braun).

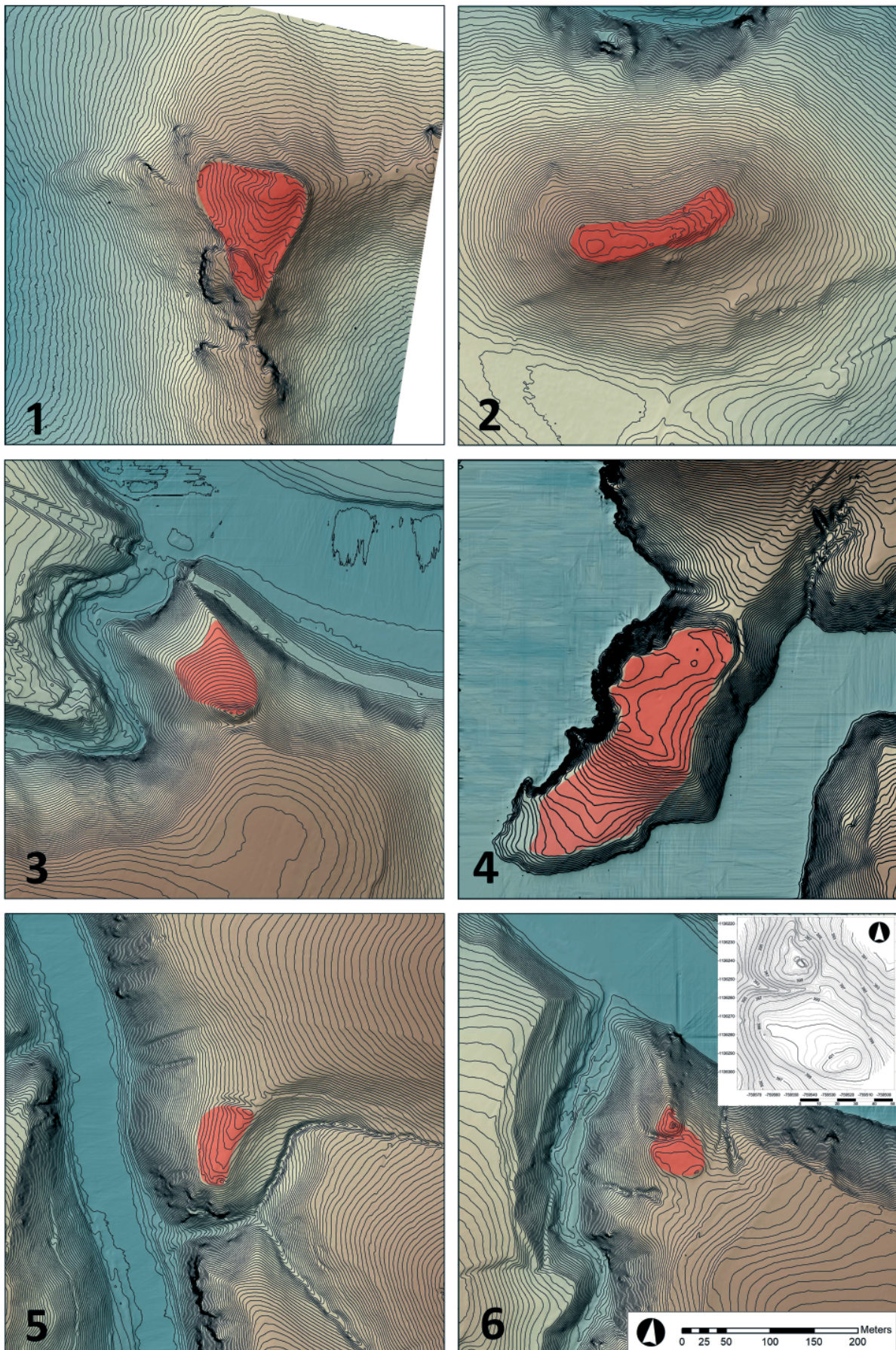


Fig. 10 Plans of South Bohemian hillforts made by airborne laser scanning (ALS): 1 Skočice; 2 Třebanice; 3 Týn nad Vltavou; 4 Voltýřov; 5 Vrcovice; 6 Všemyslice (ALS plans by the author; 6 other plan after Hlásek *et al.* 2014b)

ETRS89: B=49°18'16"; L=14°07'16".

Fortification: A circumferential rampart of the acropolis, of stone-clay construction. The curve-shaped rampart in the foreground is connected to the enclosure of the acropolis. The fortifications are very poorly preserved in the terrain.

Area: 3.7 ha.

The two-part hillfort, which consists of the trapezoidal acropolis and the rectangular foreground, is situated upon a dominant hill. The acropolis is separated by an unnoticeable rampart and a ditch. The settlement originated during the turn of the Middle Bronze Age to the Late Bronze Age. The dating of the fortification is unknown.

Ref.: Dubský 1949; Braun 1982.

C5 Opalice (Fig. 9,5)

Geomorphology: promontory.

BA period(s): Br A (?); Other period(s): –.

Excavations: (only trial trenches).

ETRS89: B=48°53'53"; L=14°24'34".

Fortification: The dominant inner rampart has two different parts. The huge southern part is 40 m long, the width of the base is 23 m, and the maximum height is 5 m (from the bottom of ditch 6 m). The minor northern part is situated upon a slope. In front of the inner rampart is a ditch (4–5 m wide). The outer rampart is smaller than the inner rampart.

Hypothetical area: 0.1 ha.

The hillfort was discovered in 2003. It is situated upon a narrow promontory. The monumentality of the fortification is characteristic. In the area of the hillfort several hoards and isolated finds of the bronze industry of the Early Bronze Age were found.

Ref.: Chvojka/John 2009; Chvojka *et al.* 2015, 423–425 Figs. 2–4.

C6 Týn nad Vltavou–Sv. Anna (Fig. 10,3)

Geomorphology: promontory.

BA period(s): Br A2/B1–B1; Other period(s): –.

Excavations: (only surface-artefact survey and trial trenches).

ETRS89: B=49°13'38"; L=14°23'28".

Fortification: The monumental stone rampart with a ditch.

Area: 0.6 ha.

The hillfort Svatá Anna near Týn nad Vltavou is located above the confluence of the Vltava and the Lužnice rivers, just opposite the important synchronous settlement Hosty. Pottery finds are

dated to the end of the Early Bronze Age; thus, the fortification can be dated to that period, too, although with some caution.

Ref.: Chvojka *et al.* 2016.

Type D

D1 Milenovice-Skalka (Figs. 6; 9,3)

Geomorphology: promontory.

BA period(s): Br A2/B1, Ha A2–B1; Other period(s): Hallstatt period.

Excavations: 2000 (O. Chvojka), 2016 (D. Hlášek). ETRS89: B=49°10'36"; L=14°13'21".

Fortification: See above the section on Fortifications.

Area: 0.6 + ? ha.

The site was long considered a multi-period hill-top site, mostly of the Late Bronze Age. It has been significantly damaged by terracing in modern times. The excavation in 2016 confirmed that the conspicuous object, which was considered to be a border to fields, is in fact the ruins of the Late Bronze Age fortification, which was formed by the rest of the rampart and the filled ditch.

Ref.: Fröhlich/Chvojka 2001; unpublished.

D2 Voltýřov – Žíkov (Fig. 10,4)

Geomorphology: promontory.

BA period(s): Ha B; Other period(s): Early Middle Ages.

Excavations: 1943, 1947 (B. Dubský); 1983, 1985, 1989 (L. Smejtek).

ETRS89: B=49°32'08"; L=14°10'47".

Fortification: See above the section on Fortifications.

Area: 2.7 ha.

The hillfort Voltýřov is situated at the northern border of South Bohemia. The most important research was led by L. Smejtek in 1980s. He concentrated on an inner area of the hillfort and made two cross-sections through the rampart.

Ref.: Dubský 1949; Smejtek 2003a; 2003b.

D3 Vrcovice–Dolní Lipice (Figs. 4; 10,5)

Geomorphology: promontory.

BA period(s): Br B1; Other period(s): –.

Excavations: 1926 (B. Dubský), 1959 (L. Hájek), 1963–1966 (A. Beneš), 2013 (D. Hlášek).

ETRS89: B=49°20'16"; L=14°09'37".

Fortification: see above the section on Fortifications.

Area: 0.4 ha.

The site is situated upon a small promontory. The most extensive research was conducted by A. Beneš. He studied the space adjacent to the inner fortification along its course and also excavated a section of the fortification. A small-scale research focused on obtaining environmental data, including samples for radiocarbon dating, was conducted in 2013. The site is unique, because it was a one-phase settlement at the beginning of the Middle Bronze Age. The well preserved fortification, reliably dated to the Middle Bronze Age, is one of two known in Bohemia.

Ref.: Dubský 1949; Beneš 1966; Hlásek *et al.* 2014a; 2015a.

D4 Všemyslice–Kozí vrch (Fig. 10,6)

Geomorphology: promontory.

BA period(s): Br B1; Other period(s): –.

Excavations: 1976 (J. Fröhlich), 1976 (A. Beneš), 1983 (L. Jiráň), 2014 (D. Hlásek).

ETRS89: B=49°14'11"; L=14°22'05".

Fortification: see above the section on Fortifications.

Area: 0.3 ha.

Hillfort Všemyslice is the second one-period site which is contemporary with the hillfort Vrcovice. It is a two-part hillfort with a separate acropolis and an enclosure foreground.

Ref.: Fröhlich 1977; Jiráň 1985; Hlásek *et al.* 2014b; 2015b.

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