

# A landscape without treasures? East Bohemia in the Hallstatt period from the perspective of hoards

Krajina bez pokladů? Východní Čechy v době halštatské z pohledu ukládání depotů

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## KEY WORDS

Early Iron Age – Hallstatt period – Platěnice culture/group – Vekerzug culture – east Bohemia – hoards – boundaries

## ABSTRACT

*The beginning of the Early Iron Age is characterised by a considerable decrease in evidence of the deposition of hoards of metal artefacts in many parts of Central Europe. This phenomenon is usually explained as a result of the social and ideological changes that were taking place in the territory of the newly forming Hallstatt culture. Until recently, east Bohemia was believed to be one of the regions in which the custom of depositing metal hoards was completely abandoned. However, newly obtained data show the opposite. In east Bohemia, we currently have evidence of five such assemblages. The article is primarily focused on the culture-chronological evaluation of the contents of these hoards. However, issues related to their find circumstances, topography, and their relationship to the cultural landscape are also discussed. Selected results are subsequently compared on a basic level in the broader Central European context. While some of the east Bohemian hoards date to Ha D, it cannot be ruled out that the deposition of others may have already occurred during Ha C. Compared to the surrounding areas with evidence of the deposition of hoards, the higher frequency of hoards composed of iron tools and/or weapons is a striking phenomenon. It is not yet clear whether its causes are to be sought in methodological, chronological or rather cultural-geographical aspects. Some of the individual artefacts from the hoards illustrate long-distance contacts and show that east Bohemia was involved in a wide network of links with areas to the west, east, and north. The repeatedly observed deposition of hoards on the boundaries of the settled areas is probably related to the symbolic aspects of territoriality of the Early Iron Age communities.*

## 1. Introduction

Hoards of metal objects rank among the most prominent phenomena of a greater part of European prehistory and have received considerable attention for many years (e.g. Montelius 1903, 3, 10–11; Stein 1979; Hansen 1991; 1994; Kurz 1995; Michálek 1999, 29–37; Smejtek et al. 2013). With the onset of the Hallstatt period (Ha C – Ha D), the custom of depositing metal artefacts decreased significantly across much of Europe (Salaš 2005, 9; Smejtek et al. 2013, 11; Maciejewski 2019a). Their much lower presence is particularly noticeable in comparison with the heavily documented Late and Final Bronze Age hoards (Kytlicová 2007; Šteffl 2014; Vachta 2016; Chvojka et al. 2017). These changes in hoard deposition practices, the causes of which are sought in socio-economic and religious transformations at the transition from the Final Bronze Age to the Early Iron Age, are mainly associated with areas of the newly forming Hallstatt culture. Hoards vanished in these territories only to reappear to a limited extent and merely in some regions during Ha D (Metzner-Nebelsick 1997, 94, 98; Chyträček et al. 2015, 219–220; 2017b, 146, 151–152; Westhausen 2019a). In contrast, in the more northerly territories, beyond the obvious limits of the Hallstatt culture's impact, deposition practices retained some degree of importance throughout the Hallstatt period (Gedl 1996; Blajer 2001; Dziegielewski et al. 2020). Alpine passes, in which the deposition of hoards was intentionally linked to long-distance routes, also represent a case on their own (Gleirscher 1996; Egg 2002; Westhausen 2019b; Kirchmayr 2020).

That said, the number of hoards known in the eastern part of the Hallstatt culture has increased considerably in recent years. Such a change in the state of knowledge can be well illustrated by the example of Moravia, where it is caused on the one hand by revisions of old finds, on the other by intensified cooperation between archaeologists and volunteer metal detectorists. In 2005, only three hoards from the Hallstatt period were reported from the territory of Moravia (Salaš 2005, 9). Today, however, there are two dozen cases of evidence of deposition practices, almost exclusively related to the territories of the Platěnice culture/group (Golec, Fojtík 2020, 200–204; Golec et al. 2023, 13, 16, Fig. 1, Suppl. 3). An increasing number of Hallstatt period hoards can also be observed in other provinces of the Eastern Hallstatt culture, including, e.g. southwest Slovakia (overview in Dubec 2023), Transdanubia (Nagy et al. 2012; Soós et al. 2023) and Slovenia (Turk 2018). Their occurrence is also sporadically observed in eastern regions neighbouring on the Hallstatt cultural area but lying outside of it, such as Spiš, the Košice Basin and northern Hungary (Miroššayová 1980; Benediková, Soják 2021; Kozubová et al. 2022b; Szabó et al. 2022; 2023).

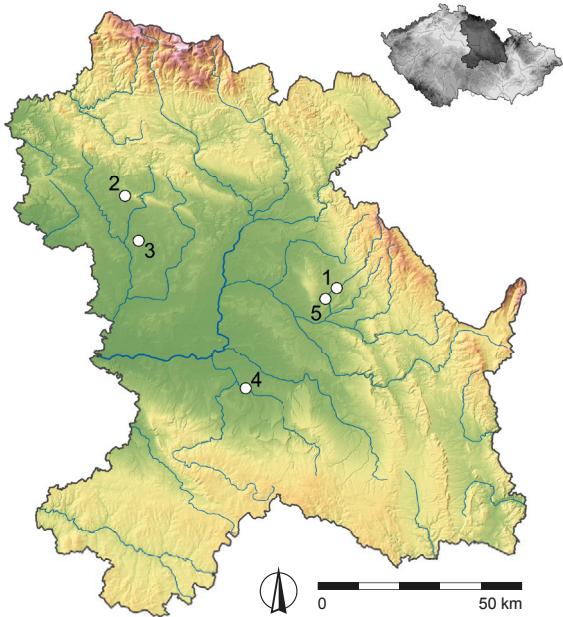
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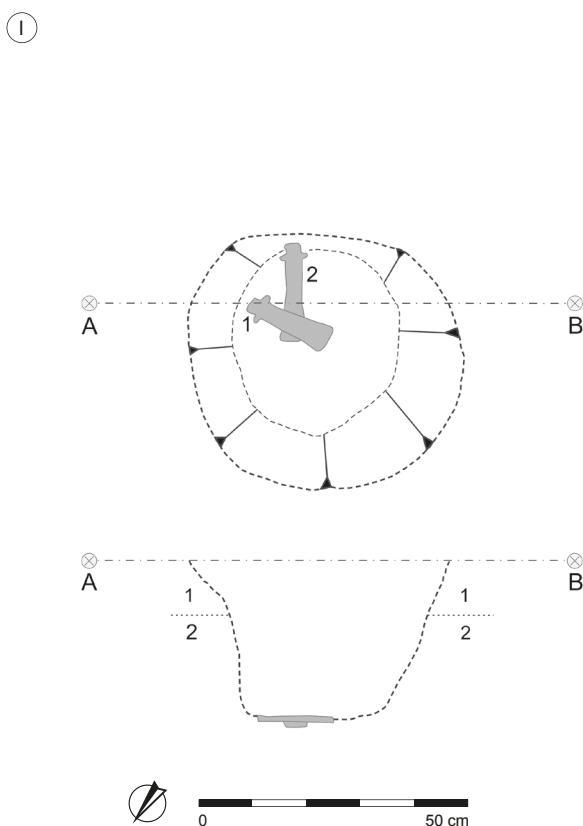


**Fig. 1.** Hallstatt period hoards in east Bohemia. 1 – Černíkovice (Rychnov nad Kněžnou District); 2 – Konecchlumí (Jičín District); 3 – Myštěves (Hradec Králové District); 4 – Stříčany (Chrudim District); 5 – Velká Ledská (Rychnov nad Kněžnou District). Base map ČÚZK. Graphic by T. Mangel.

**Obr. 1.** Depozyty z doby halštatské ve východních Čechách. 1 – Černíkovice (okr. Rychnov nad Kněžnou); 2 – Konecchlumí (okr. Jičín); 3 – Myštěves (okr. Hradec Králové); 4 – Stříčany (okr. Chrudim); 5 – Velká Ledská (okr. Rychnov nad Kněžnou). Mapový podklad ČÚZK. Sestavil T. Mangel.

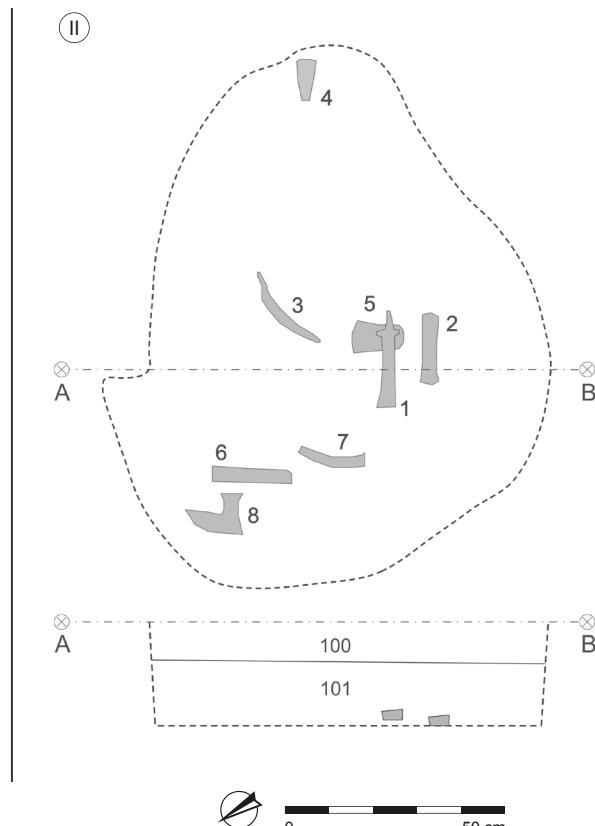
The situation is different in the western parts of the Central European Hallstatt culture. The deposition of hoards was less frequent there and only associated with certain regions. An illustrative example is provided by the situation in Bohemia, whose southern, western, central, and northwestern parts correspond to the easternmost area associated with Western Hallstatt cultures (Venclová ed. 2008, 11; Čistáková, Chytráček 2019, 28). However, the only evidence from this area that could be interpreted as the remains of hoards is three assemblages from the territory of the Hallstatt Tumulus culture in south Bohemia (Chytráček et al. 2015; Michálek et al. 2015). No other hoards have been documented to date from the remaining areas.

Similarly, east Bohemia, inhabited by populations of the East Hallstatt Platěnice culture/group (Vokolek 1999; Venclová ed. 2008, 84–97), was for a long time regarded as an area where the deposition of hoards was not practiced during Ha C and Ha D. The discovery brought to light in 2014 in the Stříčany (Chrudim District) was therefore highly surprising precisely because of its cultural ‘inappropriateness’. This assemblage of bronze and amber jewellery was interpreted as an exogenous element with no connection to the local cultural milieu (Jiráň et al. 2023). And yet, at least four other hoards from this period are currently documented in the area (Fig. 1),<sup>1</sup> although in only two cases do we have professionally made field documentation (Fig. 2). This number comprises exclusively hoards in the sense of multiple-piece deposits, i.e. assemblages of at least two artefacts deliberately and simultaneously deposited in the ground (excluding grave



**Fig. 2.** Hallstatt period hoards in east Bohemia. I – Konecchlumí (Jičín District). Documentation of the partially reconstructed find situation of the hoard. Layers description: 1 – forest floor mulch; 2 – yellow sandy soil (subsoil). Drawing by J. Skala, graphic by T. Mangel. II – Myštěves (Hradec Králové District). Documentation of the partially reconstructed find situation of the hoard. Layers description: 100 – forest floor mulch, 101 – grey-yellow clay loam with roots. Drawing by R. Bláha, P. Rokoská; graphic by T. Mangel. For the numbers of finds, see Chapter 2.

**Obr. 2.** Depozyty z doby halštatské ve východních Čechách. I – Konecchlumí (okr. Jičín). Částečně rekonstruovaná nálezová situace depotu. Popis vrstev: 1 – lesní hrabanka; 2 – žlutá písčitá hlína (podloží). Kresba J. Skala, grafika T. Mangel. II – Myštěves (okr. Hradec Králové). Částečně rekonstruovaná nálezová situace depotu. Popis vrstev: 100 – lesní hrabanka; 101 – šedožlutá jílovitá hlína prorostlá kořeny. Kresba R. Bláha, P. Rokoská; grafika T. Mangel. Čísla nálezů viz kap. 2.



goods) and random accumulations of settlement refuse (Montelius 1903, 3, 10–11; Salaš 2005, 12–15).<sup>2</sup> The objective of this paper is to provide a comprehensive assessment of the artefacts of which these assemblages consist and of their find contexts as well as to discuss their significance for the understanding of the East Bohemian Hallstatt period in a broader Central European context.

## 2. Catalogue of finds

The catalogue includes only the assemblages whose find circumstances and context make it realistically possible to consider them hoards.<sup>3</sup> Conversely, we have not included problematic or obscure cases, for which a connection to the period funerary activities cannot be ruled out.<sup>4</sup>

### 1. Černíkovice, Rychnov nad Kněžnou District (Fig. 1:1)

**Site:** Peak of Homole Hill; position WGS-84: 50.1912525N, 16.2172419E.

**Find circumstances:** Metal detector survey, 2010.

**Find situation:** In a trench-like formation at a depth of 20–30 cm. The axe blades were stacked with their blades forming a V-shape.

#### Find description:

- (1) Iron axe with an enclosed oval socket. Dimensions: l. 122 mm, blade w. 42 mm, outer dimensions of the socket 37 × 28 mm (Fig. 3:1).
- (2) Iron axe with an enclosed oval socket. Dimensions: l. 124 mm, blade w. 41 mm, outer dimensions of the socket 38 × 35 mm (Fig. 3:2).

**Date:** Ha C – Ha D.

**Context:** The assemblage was deposited on the northern edge of the settlement region in the Bělá River basin, at a distance of ca 4 km from the hillfort/hilltop settlement of Velká Ledská (see below).

**Deposited in:** Muzeum a galerie Orlických hor v Rychnově nad Kněžnou (Museum and Gallery of the Orlické Mountains in Rychnov nad Kněžnou), inv. No. A6988.

**Bibliography:** Vích 2024, 156, obr. 2:1, 2.

### 2. Konecchlumí, Jičín District (Fig. 1:2)

**Site:** Northwestern slope of Hůra Hill, plot No. 227; position WGS-84: 50.4028015N, 15.4882086E.

**Find circumstances:** Metal detector survey by J. Kracik and T. Zachoval, 18 May 2020. Subsequently, on 30 May 2020, the Regional Museum and Gallery in Jičín carried out a revision excavation and metal detector survey.

**Find situation:** According to the statement of the finder and the subsequent reconstruction of the find situation, the axes were buried at a depth of ca 30 cm in a yellow sandy layer of forest soil. No original dugout feature was identified, with the exception of the finder's trench (Fig. 2:1). The objects were laid across each other so that one axe (1) overlapped its central part with the blade part of the axe (2). No other Hallstatt period artefacts were found.

#### Find description:

- (1) Iron trunnion axe. Dimensions: preserved l. 160 mm, blade w. 64 mm, shoulder w. 53 mm, h. 8 mm, distance between trunnions and back of the axe 13 mm. Inv. No. A30806A (Fig. 3:3).
- (2) Iron trunnion axe, the trunnions are damaged. Dimensions: preserved l. 158 mm, blade w. 70 mm, h. 6 mm, distance of arms and back of the axe 15 mm. Inv. No. A30806B (Fig. 3:4).

**Chronology:** Ha C1b – Ha D.

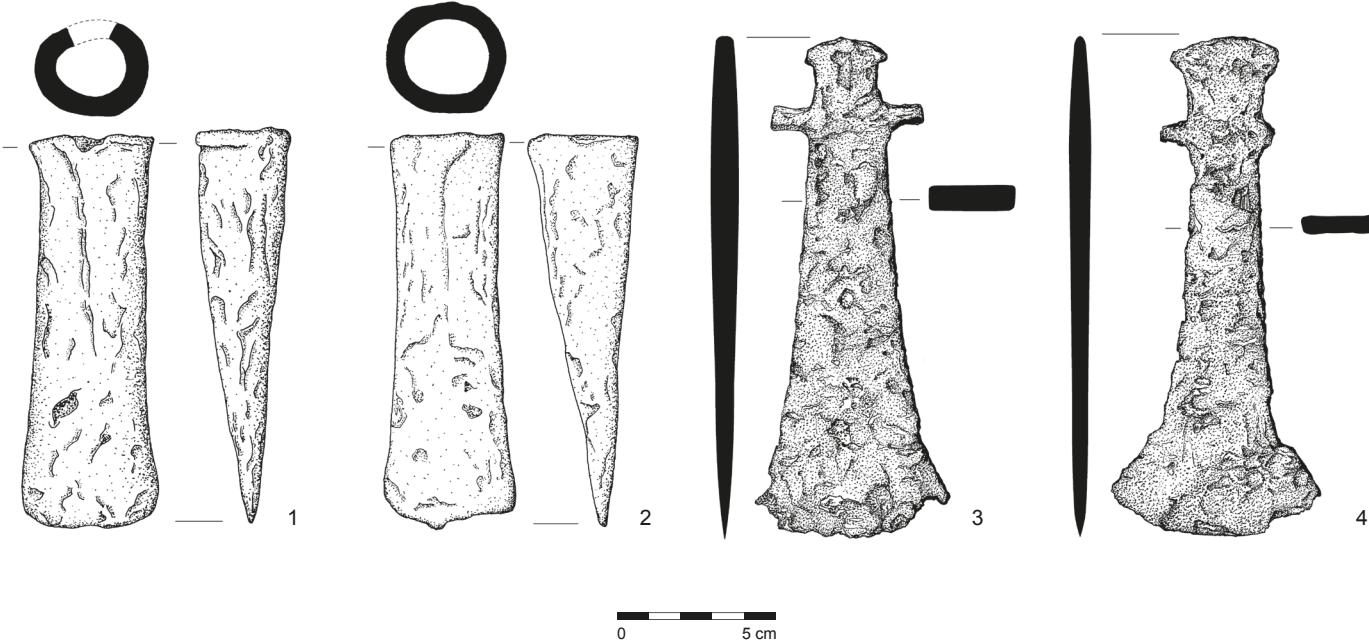
**Context:** The assemblage was deposited ca 400 m from a hillfort/hilltop settlement of Hůra dated to Ha C – Ha D1 (Vokolek, Vencl 1974).

**Deposited in:** Regional Museum and Gallery in Jičín, inv. No. 30806.

### 3. Myštěves, Hradec Králové District (Fig. 1:3)

**Site:** Malý Komorný site, at the boundary of plots No. 603 and 606; approximate position WGS-84: 50.3035851N, 15.5346796E.

**Find circumstances:** Metal detector survey by Mr. Bažant, 7 January 2022. Subsequently, revision excavation was carried out by the staff of the Museum of East Bohemia in Hradec Králové. Objects (1) to (4) were extracted by the detectorists. Objects (5) to (8) were found afterwards by the museum staff (R. Bláha and P. Rokoská).



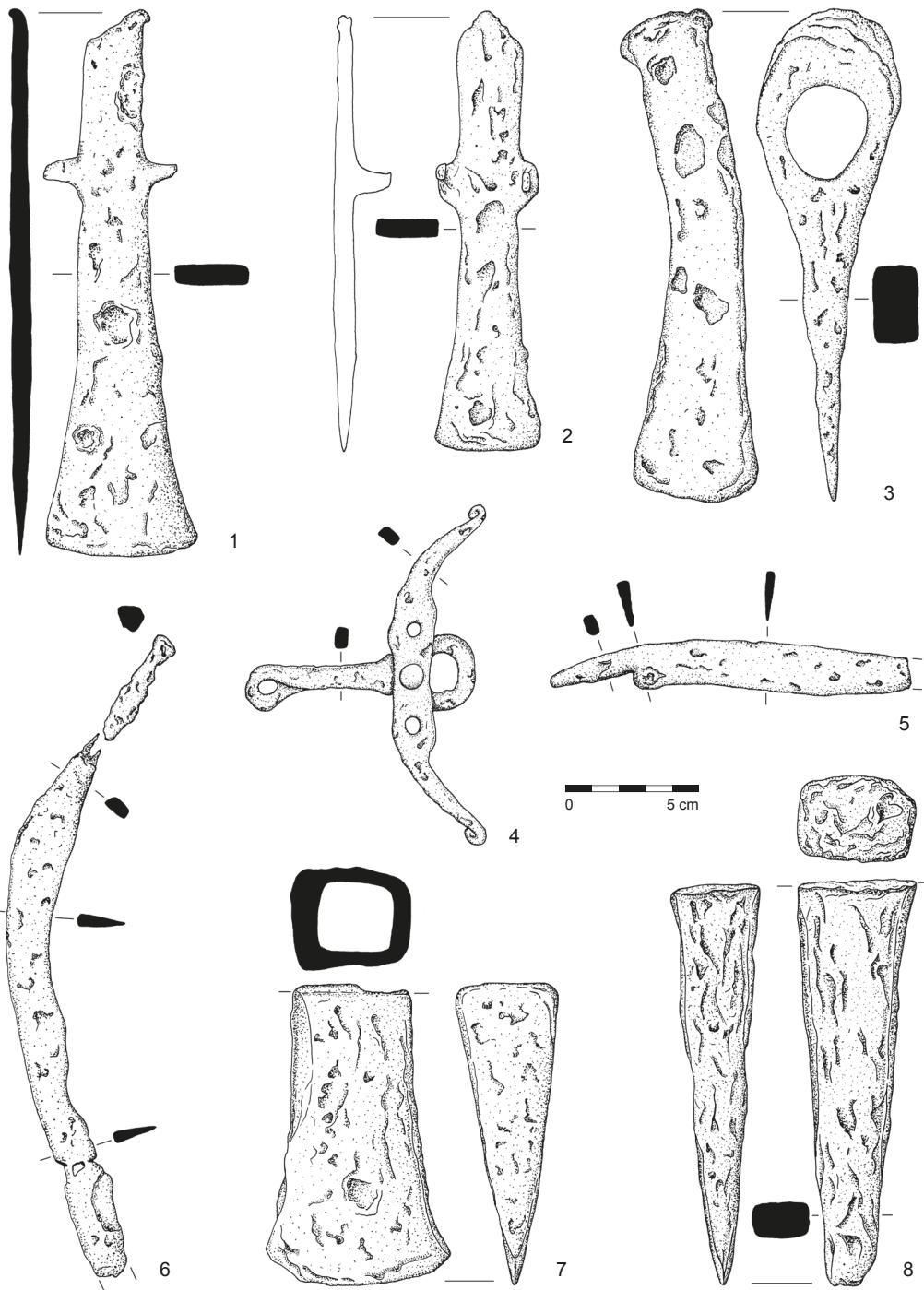
**Fig. 3.** Hallstatt period hoards in east Bohemia. 1, 2 – Černíkovice (Rychnov nad Kněžnou District); 3, 4 – Konecchlumí (Jičín District). 1, 2 – Drawing by T. Jošková; 3, 4 – drawing by M. Pleska.

**Obr. 3.** Depozyt z doby halštatské ve východních Čechách. 1, 2 – Černíkovice (okr. Rychnov nad Kněžnou); 3, 4 – Konecchlumí (okr. Jičín). 1, 2 – Kresba T. Jošková; 3, 4 – kresba M. Pleska.

**Find situation:** According to the information provided by the finders and the documentation made at the site (Fig. 2:II), the objects were located in a kidney-shaped area with dimensions of ca 120 × 100 cm. They were deposited at a depth of 20–30 cm in grey-yellow clay loam overgrown with roots (subsoil). Artefacts (1) and (2) were located approximately parallel to each other in an approximately west-east direction, with object (5) lying at a right angle below object (1). Object (3) was located 10–20 cm northeast of the described group. A lone object (4) was located at a distance of ca 30–40 cm to the east. Objects (6–8) lay next to each other to the northwest of the artefacts (1–3) and (5), with the longer sides in a more north-south direction. No traces of any other fill or wrapping were detected, and no other Hallstatt period artefacts were found in the vicinity.

**Find description:**

- (1) Iron trunnion axe, its back partly broken off. Dimensions: preserved l. 206 mm, blade w. 55 mm, trunnion w. 53 mm, w. 5–7 mm, distance between trunnions and extension of the nape 53 mm (Fig. 4:1).
- (2) Iron battle axe with an asymmetrically located shaft hole. Dimensions: l. 185 mm, h. of blade 46 mm, h. of the back 30 mm, maximum w. at the shaft 56 mm, diameter of shaft 34 × 31 mm (Fig. 4:2).
- (3) Iron sickle, the tang is broken, the tip is not preserved, the blade is deformed. Dimensions: preserved l. 205 mm, maximum blade w. 18 mm, blade h. 4 mm, tang w. 6 mm (Fig. 4:6).
- (4) Iron wedge-shaped anvil. Dimensions: l. 153 mm, dimensions of the irregularly rectangular working surface 45 × 33 mm, w. of the point ca 16 mm (Fig. 4:8).



**Fig. 4.** Hallstatt period hoards in east Bohemia. Hoard from Myštěves (Hradec Králové District). Drawing by T. Jošková.

**Obr. 4.** Depoty z doby halštatské ve východních Čechách. Depot z Myštěvsí (okr. Hradec Králové). Kresba T. Jošková.

- (5) Iron axe with enclosed rectangular socket. Dimensions: l. 112 mm, w. of blade 67 mm, outer dimensions of rectangular socket 41 × 37 mm (Fig. 4:7).
- (6) Iron trunnion axe, the back of the axe is broken off, the trunnions are bent perpendicular to the plane of the blade. Dimensions: preserved l. 165 mm, w. of blade 41 mm, h. 4–8 mm (Fig. 4:2).
- (7) Iron knife with arched back and flat tang, the tip is broken off. Dimensions: preserved l. 135 mm, w. of blade 18 mm, h. of blade 4 mm, l. of the tang 30 mm, cross-section of the tang 8 × 4 mm (Fig. 4:5).
- (8) Half of iron horse bit, the mouthpiece and cheekpiece are connected by rivet. Dimensions: l. of the mouthpiece 87 mm, cross-section of mouthpiece 8 × 5 mm, l. of cheekpiece 125 mm (Fig. 4:4).

**Chronology:** Ha D2 – Ha D3.

**Context:** No other known context.

**Deposited in:** Muzeum východních Čech v Hradci Králové (Muzeum of East Bohemia in Hradec Králové), accession No. 15/2022.

#### 4. Stíčany, Chrudim District (Fig. 1:4)

**Site:** Za Sady site, plot. No. 537; position WGS-84: 49.9705022N, 15.8977139E.

**Find circumstances:** Metal detector survey by V. Dotzauer, 8 February 2014. Revision excavation and metal detector survey were subsequently carried out by the staff of the East Bohemia Museum in Pardubice.

**Find situation:** The objects together with isolated fragments of daub and non-diagnostic pottery were found on an area of ca 50 × 60 cm in the lower part of the brown-black topsoil at a depth of 25–40 cm. No sunken feature was identified, with the exception of the finder's trench.

**Finds description:** At least 13 pieces of annular arm and leg ornaments (some fragmentary); 5 pieces of partially preserved neck-rings/pectoral, 1 piece of Beratzhausen-type loop; 184 pieces of decorative clamps of Thalmässing-type; 3 pieces of amber beads. For detailed description and evaluation, see Jiráň et al. 2023.

**Chronology:** Ha D1.

**Context:** The assemblage was found directly in or close to a settlement area dated approximately to the timespan of Ha B – Ha D (Kalferst et al. 1993, 26).

**Deposited in:** Chrudim Regional Museum, accession No. 205/2015.

**Bibliography:** Jiráň et al. 2023.

#### 5. Velká Ledská, Rychnov nad Kněžnou District (Fig. 1:5)

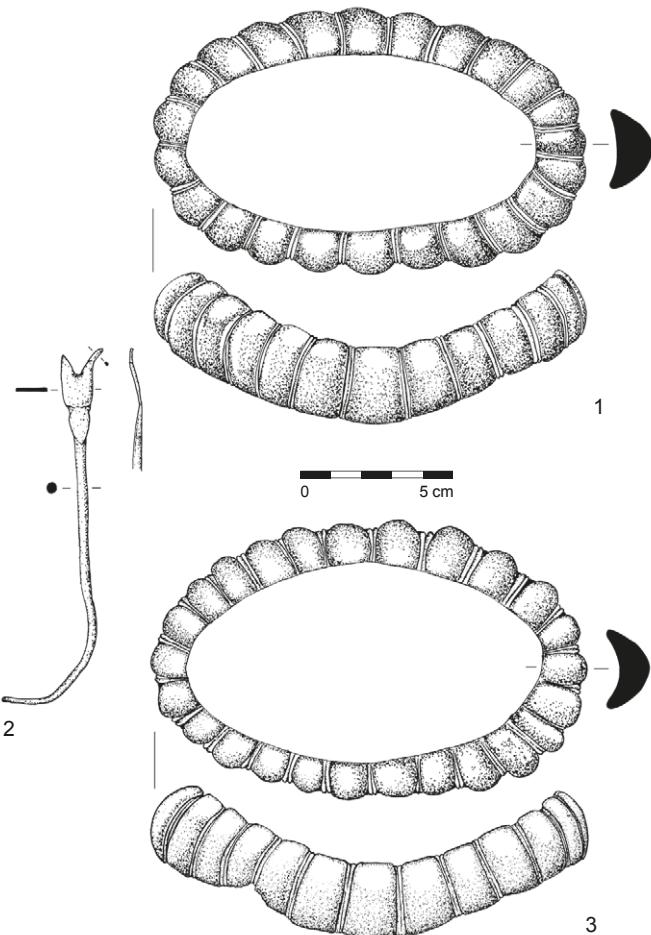
**Site:** Northeastern slope of Hradiště Hill, plot No. 112/1; position WGS-84: 50.1674167N, 16.1762667E, accuracy ± 5 m.

**Find circumstances:** Metal detector survey by T. Janeček, 17 April 2008.

**Find situation:** The pin (1) was found with the anklet (2) around which it was bent, according to the finder's statement. The second anklet (3) was found at a distance of ca 5 m from the first one. It crumbled after being removed from the ground.

**Find description:**

- (1) Larger fragment of a bronze double-spiral pin, flattened triangular neck, from which two spirals originally protruded (not preserved); the pin itself is deformed. Dimensions: preserved l. ca 157 mm, pin diameter 3 mm, neck w. 10 mm. Inv. No. A3536 (Fig. 5:2).
- (2) Cast bronze saddle-shaped anklet with C-shaped cross-section and vertical ribbing, broad rounded ribs alternate with pairs of narrow ribs. Dimensions: internal ca 119 × 67 mm, w. 22–27 mm, thickness 3–6 mm. Inv. No. A3534 (Fig. 5:1).



**Fig. 5.** Hoards from the Hallstatt period in east Bohemia. Hoard from Velká Ledská (Rychnov nad Kněžnou District). Drawing by T. Jošková, M. Pleska.

**Obr. 5.** Depozyt z doby halštatské ve východních Čechách. Depozit z Velké Ledské (okr. Rychnov nad Kněžnou). Kresba T. Jošková, M. Pleska.

- (3) Cast bronze saddle-shaped anklet with C-shaped cross-section and vertical ribbing, broad rounded ribs alternate with pairs of narrow ribs. Preserved in four fragments. Dimensions: internal ca 114 × 67 mm, w. 21–27 mm, thickness 4–6 mm. Inv. No. A3535 (Fig. 5:3).

**Chronology:** Ha D1.

**Context:** The assemblage was found on the northeastern slope of the Hradiště site, near the northern end of the isthmus rampart of the hillfort dated to the Lusatian culture period (Kalferst et al. 1987, 24; Čtverák et al. 2003, 336); however, more recently the site also yielded some as yet unpublished finds from the Ha C – Ha D1 period.

**Deposited in:** Muzeum a galerie Orlických hor v Rychnově nad Kněžnou (Museum and Gallery of the Orlické Mountains in Rychnov nad Kněžnou), accession No. A32/2019, inv. No. A3534–3536.

#### 3. Cultural and chronological evaluation of artefacts from the hoards

In addition to the jewellery assemblage from Stíčany, which has recently been studied in detail (Jiráň et al. 2023), there are four other hoards in east Bohemia containing a total of 15 iron and bronze artefacts. The analysed hoards consist of a functionally heterogeneous group of artefacts represented by axes and weapons, a horse harness, tools as well as jewellery and clothing accessories. The elements of the horse harness, weapons (an iron battle axe), jewellery and clothing accessories are of the greatest informational value in terms of the study of possible

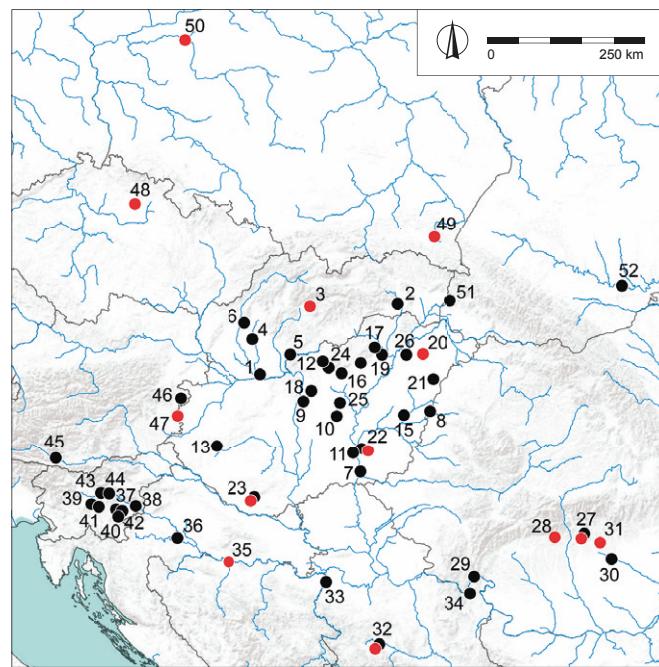
interregional contacts of east Bohemia in the Hallstatt period. In contrast, trunnion axes, socket axes, and tools were common throughout the whole of Central Europe during the Hallstatt period and are of no greater cultural and chronological significance.

### 3.1 Horse harness

The horse harness is represented in the analysed assemblage by an incomplete iron horse bit from the Myštěves hoard (Fig. 4:4). One arm of a two-part mouthpiece with an enlarged round outer eyelet and a riveted cheekpiece is preserved from the bit. The cheekpiece is arcuated with two holes in its plate-like central part for threading the leather headcollar straps, while both ends are tapered and looped. The construction of the Myštěves specimen is identical to the bits referred to in the literature as horse bits of the Szentes-Vekerzug type. These are characterised by the fixed connection of the cheekpiece to the mouthpiece by means of a rivet. The construction of the horse bits of the Szentes-Vekerzug type differs not only from those of the Hallstatt culture, in which only the bits with movable cheekpieces were widespread, but also from those of the Late Bronze Age and Early Iron Age sites in Eastern Europe and the Caucasus. The attachment of the cheekpieces to the mouthpiece with rivets is documented only in the case of the Vekerzug-type horse bits. These probably resulted from the autochthonous development in the Vekerzug culture area, in which neither the areas lying to the west and east of this territory, nor its indigenous Final Bronze Age / Early Hallstatt predecessors played any role (cf. in further detail Kozubová 2011, 73–75, with references; 2021, 94, 95). Apart from the main distribution area in the Vekerzug culture with more than 60 specimens (Fig. 6:1–12, 14–26), smaller concentrations of finds of Vekerzug-type horse bits are documented in eastern Slovenia (Fig. 6:37–44) and in the Ferigile culture in the southern Carpathian-Danube region (Fig. 6:27–31; see e.g. Werner 1988, 15–24, Taf. 1:7; 2–9, 11–13; 3:14–17, 20; 4:21–23; 5:24–26; 6:27, 29–33; 7:34–40; 8:41, 43–46; 9:49; 10:55–58; 11:59, 60, 63, 65–67; 12:68–72; 13:73, 74, 80, 82, 83; 14:89, 91–93; 68A; Romsauer 1993, obr. 10:3; tab. VI:25; Kemenczei 2009, 181, Liste 5; Dular 2016, 77, Taf. 4:4; Kvietok 2017, 455, tab. VI:17; Pieta 2017, obr. 2:1; Măndescu 2019, Fig. 6:1; Kozubová 2021, 94, footnote 36, with references). However, sporadic pieces are also known from other areas of Central Europe – from Transdanubia, central Croatia, eastern Austria, east Bohemia, and Poland (Fig. 6:3, 13, 36, 45–50), as well as from southeastern Europe – from Serbia and northern Bosnia and Herzegovina (Fig. 6:32–35; see e.g. Werner 1988, 15, 19, 20, 23, 24, Taf. 2:10; 8:42, 47; 9:50–53; 10:54; 13:75–79, 81; 14:84–86; Križ 1997, t. 37:2; Čučković 2004, 183, sl. 5; kat. 33; Jevtić 2006, Fig. 18:13–16; Gleirscher 2009, Abb. 13:11; Teleaga 2017, Fig. 4; 5; Bochnak, Skowron 2022, ryc. 32:1–6; 33). In Eastern Europe, horse bits of the Szentes-Vekerzug type are rarely encountered, which is confirmed by two specimens from graves of the Kushtanovica culture and the Western Podolian group in western Ukraine (Fig. 6:51, 52; Popovich 1985, 59, rys. 8:4; Smirnova 1993, rys. 7:4).

Although most of the Vekerzug-type horse bits come from graves (Fig. 6:1, 4, 5, 7–11, 14, 22, 23, 25–33, 37–41, 46, 50–52), their stray finds, or finds with unclear find circumstances, are also relatively common (Fig. 6:2, 3, 6, 12, 13, 15–21, 24, 35, 36, 42–45, 47). On the contrary, finds of horse bits are at most rarely documented in settlements (Romsauer 1993, tab. VI:25). Similarly, hoards only rarely contained Vekerzug-type horse bits – apart from the Myštěves hoard, another bit find comes from the recently published hoard from Międzybrodzie (Sanok County) in southeastern Poland (Bochnak, Skowron 2022, ryc. 32:1–6; 33).

Horse bits of the Szentes-Vekerzug type, whose occurrence can be dated between the second half / end of the 7th century BC and the end of the 5th or beginning of the 4th century BC (Ha C2/D1 – LT A), have been studied by several researchers. The main criteria for their typological and chronological classification are, first, the type of two side threading openings on cheekpieces (eyelets or holes) and, secondly, the shape and cross-section of the cheekpieces (with or without plate-like central part) and their terminals (for the typology, see, e.g. Párducz 1965, 149–151, Fig. 4; Kemenczei 1985, 50–62, Abb. 2:3, 5;



**Fig. 6.** The distribution of iron horse bits of the Szentes-Vekerzug type. Red dots – variant IIB1 after W. M. Werner (1988); black dots – other variants after W. M. Werner. Slovakia: 1 – Chotín IA; 2 – Košice; 3 – L'ubietová-Vysoká; 4 – Nitra-Dolné Krškany, Nitra-Mikov dvor; 5 – Presel'any nad Ipl'om; 6 – Radošina-Pri Kornútovéj chate. Hungary: 7 – Algyő-Bartók Béla utca; 8 – Ártánd-Zomlín pusztá; 9 – Budapest-Soroksár-Akácos dűlő; 10 – Cegléd; 11 – Csanytelek-Újhálastó; 12 – Cserhátszentiván; 13 – Cserszegtomaj; 14 – Eger-Nagy Eged; 15 – Füzesgyamart; 16 – Gyöngyös; 17 – Miskolc-Diósgyőr-Kerekdomb; 18 – Nagytarcsa; 19 – Nyékládháza-Mezőnyék; 20 – Nyíregyháza-Nyírfá utca; 21 – Nyírmáronfalva-Kutyabagos pusztá; 22 – Szentes-Vekerzug; 23 – Szentlőrinc; 24 – Szurdokpüspöki; 25 – Tápiószele-Szumrák; 26 – Tiszaúvári-Csárdapart, Tiszaúvári-Dózsa-telep. Romania: 27 – Curtea de Argeş; 28 – Ferigile; 29 – Ieşeniţa; 30 – Tigveni; 31 – Valea Stâni. Serbia: 32 – Atenica; 33 – Badovinci; 34 – Mihajlov ponor on Miroč. Bosnia and Herzegovina: 35 – Donja Dolina. Croatia: 36 – Sisak. Slovenia: 37 – Brezje pri Trebelnem; 38 – Libna; 39 – Magdalenska gora; 40 – Novo mesto; 41 – Štična; 42 – Šmarjeta; 43 – Vače; 44 – Zagorje ob Savi. Austria: 45 – Landskron; 46 – Oberpullendorf; 47 – Schandorf. Czechia: 48 – Myštěves. Poland: 49 – Międzybrodzie; 50 – Wymysłowo. Ukraine: 51 – Nevytske/Невицьке; 52 – Perebykvitsi/Перебіківці. After Werner 1988, with additions by A. Kozubová. Base map Esri. Graphics by T. Holbová.

**Obr. 6.** Rozšíření železných koňských uidel typu Szentes-Vekerzug. Červené kroužky – varianta IIB1 podle W. M. Wernera (1988); černé kroužky – ostatní varianty podle W. M. Wernera. Slovensko: 1 – Chotín IA; 2 – Košice; 3 – L'ubietová-Vysoká; 4 – Nitra-Dolné Krškany, Nitra-Mikov dvor; 5 – Presel'any nad Ipl'om; 6 – Radošina-Pri Kornútovéj chate. Maďarsko: 7 – Algyő-Bartók Béla utca; 8 – Ártánd-Zomlín pusztá; 9 – Budapest-Soroksár-Akácos dűlő; 10 – Cegléd; 11 – Csanytelek-Újhálastó; 12 – Cserhátszentiván; 13 – Cserszegtomaj; 14 – Eger-Nagy Eged; 15 – Füzesgyamart; 16 – Gyöngyös; 17 – Miskolc-Diósgyőr-Kerekdomb; 18 – Nagytarcsa; 19 – Nyékládháza-Mezőnyék; 20 – Nyíregyháza-Nyírfá utca; 21 – Nyírmáronfalva-Kutyabagos pusztá; 22 – Szentes-Vekerzug; 23 – Szentlőrinc; 24 – Szurdokpüspöki; 25 – Tápiószele-Szumrák; 26 – Tiszaúvári-Csárdapart, Tiszaúvári-Dózsa-telep. Rumunia: 27 – Curtea de Argeş; 28 – Ferigile; 29 – Ieşeniţa; 30 – Tigveni; 31 – Valea Stâni. Srbsko: 32 – Atenica; 33 – Badovinci; 34 – Mihajlov ponor on Miroč. Bosna a Hercegovina: 35 – Donja Dolina. Chorvatsko: 36 – Sisak. Slovinsko: 37 – Brezje pri Trebelnem; 38 – Libna; 39 – Magdalenska gora; 40 – Novo mesto; 41 – Štična; 42 – Šmarjeta; 43 – Vače; 44 – Zagorje ob Savi. Rakousko: 45 – Landskron; 46 – Oberpullendorf; 47 – Schandorf. Čechy: 48 – Myštěves. Polsko: 49 – Międzybrodzie; 50 – Wymysłowo. Ukrajina: 51 – Nevytske/Невицьке; 52 – Perebykvitsi/Перебіківці. Podle Werner 1988, doplněno A. Kozubovou. Mapový podklad Esri. Grafika T. Holbová.

3: 6–10; 4–8; 2009, 51, 52; Werner 1988, 12–30, Taf. 1:7; 2–14; Kozubová 2011, 73–85; 2013b, 113–115, obr. 36; 2019, 92, 93; for the chronology, see e.g. Kemenczei 1985, 64; 2009, 51, 52; Vulpe 1990, 121–127; Kozubová 2011; 2019, 92–94; Teleaga 2017, 11, 21). For E. Teleaga (2017, 17–21), on the contrary, the criteria for the differentiation of horse bit types are the size of the cheekpieces and the degree of their curvature, which the author considers as a chronological indicator. The bit from the Myštěves hoard can be attributed to type II, variant B1 after W. M. Werner (1988, 19, 20), or to variant II4 after A. Kozubová (2011, 83) or to variant 2 after T. Kemenczei (1985, 51–54). In contrast to the specimen from Myštěves, the cheekpieces of most of the 16 bits of this variant are terminated either conically or with buttons (see Werner 1988, Taf. 8:43, 44; 9:49–51; Kvietok 2017, tab. VI:17; Măndescu 2019, Fig. 6:1).

Compared to other variants of the Vekerzug-type horse bits, those of type II, variant B1, are characterised by wider distribution especially outside the territory of the Vekerzug culture itself, from where only three specimens are known – two of them come from the cemetery of Szentes-Vekerzug (Fig. 6; Werner 1988, 19, Taf. 8:46, 18, 49). On the contrary, bits of this variant are more abundantly represented in the graves of the Ferigile culture and in the cemetery at Szentlőrinc (Werner 1988, 19, 20, Taf. 8:43–45, 50–52; Măndescu 2019, Fig. 6:1). Their sporadic finds are also known from northern Bosnia and Herzegovina, Burgenland, and western and southeastern Poland (Werner 1988, 19, 20, Taf. 8:42, 47; 9:53; Bochnak, Skowron 2022, ryc. 32:1–6; 33).

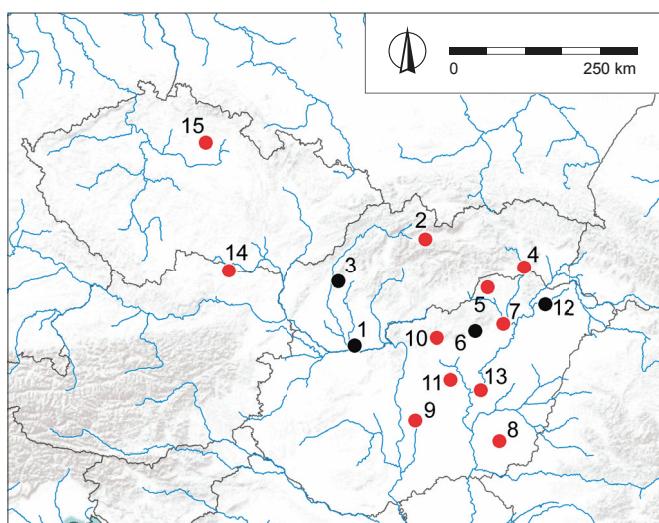
There is insufficient evidence for dating horse bits of type II, variant B1 exclusively to the LT A stage, as assumed by E. Teleaga (2017, 21) for all the Vekerzug-type bits of his third group with strongly arcuate cheekpieces. Most of the graves with bits of this variant contained chronologically indistinct accompanying finds. The inventory of grave 12 from Szentes-Vekerzug consisted, among other things, of bronze phalerae of the Magdalenska gora type, which were used during Ha D3 and LT A (see Dízdar 2023, 136–140, with references; Párducz 1952, 144, 145, pl. XLII:1; XLIII:2; XLIV; XLV:1–8, 10, 11; XLVI; XLVII:1–4; XLVIII; XLIX:1, 2, 10). Graves 52, 58, and 60 from Szentlőrinc contained no chronologically significant objects (Jérem 1968, 169–171, Fig. 26:52; 28:58, 60). The remaining graves from the cemetery with chronologically significant grave goods – mainly jewellery and clothing accessories – are dated to the Late Hallstatt and Early La Tène periods (see Soós 2020, 68, 97, 98). The graves with horse bits from Szentlőrinc can thus only be tentatively dated to this period (Ha D2/D3 – LT A/B1a), most likely to the first half of the 5th century BC (see Kozubová 2011, 83; Kmetová 2014, 189). The occurrence of horse bits of type II, variant B1 before stages Ha D3 and LT A could be suggested by the inventory of grave 1 from burial mound 44 in Ferigile, which consisted of ceramic vessels with decoration typical for the 6th century BC (see Vulpe 1990, 55, 56, Taf. 52A:18, 19, 24; Topal 2022, 53). Although opinions differ as to the exact date of grave 28a from Wymysłów containing a bronze fibula with a decorated foot, the grave in question is dated to stages Ha D3 and LT A (cf. further Bochnak, Skowron 2022, 74–76, with references). The Międzybrodzie hoard also did not contain chronologically sensitive artefacts, and its dating to the 5th century BC (more likely to its second half) is based on the dating of the horse bit based on E. Teleaga's classification (see Bochnak, Skowron 2022, 76). We can thus conclude that the occurrence of horse bits of type II, variant B1 is not limited to LT A, as the bits of this variant were already in use in the Late Hallstatt period. The lower chronological limit of the Myštěves hoards to

Ha D2 – Ha D3 or Ha D3 is indicated by the lower limit of the occurrence of trunnion axes of variant III<sub>3</sub>A1 after A. Wesse (see below).

### 3.2 Axes and weapons

The largest category of artefacts in the hoards is axes. Determining their purpose is not easy, however, as they may have served several simultaneous functions, and it is not possible to classify them in a clear functional way. Axes could have been used as tools as well as weapons (for trunnion axes, see Wesse 1990, 94, 95, 135–142). Their grave finds and presence in hoards also testify to their symbolic meaning.

The most distinctive representative of this category was present in the Myštěves hoard – an iron axe with a wide circular shaft hole. The body of the 18.5 cm-long axe is slightly arched, without a neck, with a massive rounded butt, and a broad, almost fan-shaped blade (Fig. 4:3). The Myštěves axe has strong morphological similarities to iron battle axes of the Vekerzug culture, specifically to those of type II after A. Kozubová (2010), i.e. axes with an asymmetrically located shaft hole. Vekerzug-type battle axes with an asymmetrically placed shaft hole differ from the Myštěves specimen only in the shape of their butt – the sporadically occurring variant II1 is characterised by a short neck and a hemispherical butt, while the more numerous variant II2 is characterised by a slightly elongated hammer-shaped butt (Kozubová 2010, 53–55, obr. 7:3a, 4, 4a, 5, 5a). The axe from Myštěves also corresponds to Vekerzug-type battle axes in its length – their lengths vary from 13.4 to 20.9 cm, but most of them are 16.5–18 cm long (Kozubová 2010, 55). In contrast to the much more frequent battle axes of A. Kozubová's type I with a symmetrically located shaft hole,<sup>5</sup> type II axes occurred almost exclusively at Vekerzug culture sites (Fig. 7). The exceptions from this



**Fig. 7.** The distribution of iron battle axes of variants II1 and II2 after A. Kozubová (2010). Black dots – variant II1; red dots – variant II2. Slovakia: 1 – Chotín IB; 2 – Demänovská Dolina – Liptovský Mikuláš-Ploštín, Demänovská hora; 3 – Marhát; 4 – Nižná Myšľa-Sazálík. Hungary: 5 – Alsótelekes-Dolinka; 6 – Eger-Nagy Eged; 7 – Hejőkeresztúr; 8 – Oroszáha-Gyopáros; 9 – Szabadszállás-Józan; 10 – Szurdokpüspöki; 11 – Tápiószenze-Szumrák; 12 – Tiszabercel (Paszab); 13 – Törökszentmiklós-Surján. Austria: 14 – Retz. Czechia: 15 – Myštěves. Base map Esri. Input data by A. Kozubová; graphic by T. Holbová.

**Obr. 7.** Rozšíření železných bojových sekér variant II1 a II2 podle A. Kozubové (2010). Černý kroužek – varianta II1; červený kroužek – varianta II2. Slovensko: 1 – Chotín IB; 2 – Demänovská Dolina – Liptovský Mikuláš-Ploštín, Demänovská hora; 3 – Marhát; 4 – Nižná Myšľa-Sazálík. Maďarsko: 5 – Alsótelekes-Dolinka; 6 – Eger-Nagy Eged; 7 – Hejőkeresztúr; 8 – Oroszáha-Gyopáros; 9 – Szabadszállás-Józan; 10 – Szurdokpüspöki; 11 – Tápiószenze-Szumrák; 12 – Tiszabercel (Paszab); 13 – Törökszentmiklós-Surján. Rakousko: 14 – Retz. Čechy: 15 – Myštěves. Mapový podklad Esri. Data A. Kozubová; grafika T. Holbová.

statement include the axe from Myštěves (Fig. 7:15) and another new find of variant II2 from Demänovská hora in the cadastre of Demänovská Dolina and Liptovský Mikuláš-Ploštín (Liptovský Mikuláš District / SK; Fig. 7:2), as well as an incomplete iron axe from inhumation grave 2 from Retz (Hollabrunn District / AT; Fig. 7:14) dated to Ha C2 / Ha D1 (Teržan 1998, 516, 538, Taf. 3:1; Metzner-Nebelsick 2002, 380; Benediková et al. 2024, 292, pl. V:17). Its morphologically closest parallels are the Vekerzug battle axes of variant II2. The axe from Myštěves has its closest typological parallels among the battle axes from sites of the Vekerzug culture, especially from Hejőkeresztúr (Borsod-Abaúj-Zemplén County / HU) and Szurdokpüspöki (Nógrád County / HU; Kemenczei 2009, 122, Taf. 22:7; Tankó 2015, 435, Abb. 2:15).

A total of 15 finds of type II battle axes are currently known from the territory of the Vekerzug culture (three of them of variant III1 and 12 of variant II2).<sup>6</sup> Some of them come from graves (Fig. 7:1, 5, 8, 9, 11), while others are stray finds or surface finds from burial grounds (Fig. 7:3, 6, 7, 10, 12, 13; Párducz 1966, 73, 74, pl. LXV:3a, 3b; Juhász 1976, 245, 246, kép 6:2a, 2b, 4a, 4b; Patay, Kiss 2001–2002, 87, 88, ábra 9:3; Jakubčinová 2008, 53, obr. 1:13; Kemenczei 2009, 122, 134, 140, 158, 159, Taf. 22:6, 7; 62:10; 96:1; 129:1; 132:10; Kozubová 2013b, 129, tab. 101:6, 6a; Tankó 2015, 435, Abb. 2:15). An exception to this is the hoard from Nižná Myšľa (Košice-okolie District / SK; Fig. 7:4; Miroššayová 1980, 383, obr. 1:3).

In the Vekerzug culture, iron battle axes not only of type II but also of type I have weak chronological sensitivity. Their primary occurrence here dates between the 6th century and the first half of the 5th century BC (with a possible overlap into LT A), while some axes can be dated as early as the last quarter/end of the 7th century BC / early Ha D1 (Kozubová 2010, 54, 55, 61). Therefore, the presence of the iron battle axe has no bearing on the dating of the Myštěves hoard.

Four flat iron trunnion axes were present in the Konecchlumí and Myštěves hoards. These axes were widespread throughout much of Europe during the Early Iron Age, especially in the wider Central European area, where distinct concentrations of them can be observed especially in Poland and Austria (Wesse 1990, 73–185, Karten 15; 16–18; see also Pülpán et al. 2022, 40–43, with references, obr. 11). Since their comprehensive monographic overview by A. Wesse (1990), not only has the number of new pieces in Central Europe increased significantly, but several new studies have been devoted to them (e.g. Parzinger 1995, 66, Abb. 23; Studeníková 2000, 71–76; Derrix 2001; Stöllner 2002, 129; Hlava 2003, 126–128; Gedl 2004, 51–59, Taf. 10:91, 92; 11–13; Tecco Hvala 2012, 109–111; Fojtík, Popelka 2017; Gediga et al. 2020, 75, 76, ryc. 126–130; Michnik, Dzięgielewski 2022, 105, 106). Bohemia is among the regions in which they have been evaluated in detail most recently (see also Michálek et al. 2015, 120, 121, 125–127, obr. 10; Trefný 2017, 250–252; Pülpán et al. 2022; Mangel et al. 2023).

The trunnion axes from Konecchlumí and Myštěves differ from each other in certain typological features as well as in their proportions. Both specimens from Konecchlumí rank among the broad types with fan-shaped blades and distinctive trunnions. The short back is conspicuously set off and rounded. The distance between the upper edge of the trunnions and the lower edge of the set-off back is less than 2 cm (Fig. 3:3, 4). Both specimens can thus be classified as variant III<sub>3</sub>C1 after A. Wesse (1990, 80, Abb. 19; Taf. 35). The occurrence of this variant with an approximate date to Ha C2 – Ha D2<sup>7</sup> is almost exclusively restricted to the territory of Bohemia (with a concentration of finds mainly in south Bohemia), Moravia and Lower Silesia. As a rule, these are isolated finds, though they are also sporadically

documented in hoards (Wesse 1990, 80, 158–162, Karte 17; Michálek et al. 2015, 125–127; Pülpán et al. 2022, 7, 10). The two axes from Myštěves, on the other hand, represent a slender trapezoidal type with a long back, which is broken off at the upper end in both cases. The trunnions of both of these axes are set very low, with the distance between the upper edge of the trunnions and the preserved end of the back being greater than 3 cm (Fig. 4:1, 2). An exact typological classification of the two Myštěves trunnion axes is problematic due to the incomplete state of preservation. In the case of the better-preserved specimen with its original length of more than 20.6 cm, its long back seems to have been indented and rounded and the axe can therefore be classified as variant III<sub>3</sub>A1 after A. Wesse (Fig. 4:1). The densest distribution of axes of this variant is in Upper Austria, where their finds are concentrated, especially at the cemetery of Hallstatt (Gmunden District). Sporadic finds of axes of variant III<sub>3</sub>A1 are also known from eastern Austria, east Moravia, southwestern Slovakia, Hungary, Serbia, and Bosnia and Herzegovina, usually as components of grave furnishings (see Mayer 1977, Taf. 94:1405; 95:1406, 1411, 1415, 1419; 96:1420, 1424, 1429, 1432; Wesse 1990, 79, 193–196, Karte 17; Pülpán et al. 2022, 11, with references). Although the dating of the axes of variant III<sub>3</sub>A1 is the same as that of variant III<sub>3</sub>C1, their earliest occurrence in Bohemia is sporadically attested as early as Ha C1b, and some settlement finds attest their survival down to Ha D2 – Ha D3 (Koutecký 2014, 650, 653; Pülpán et al. 2022, 11, 39, 43, 44).

Iron socketed axes are represented in the analysed assemblage by three specimens of two basic types – two shorter axes with a circular to oval socket come from the Černíkovice hoard (Fig. 3:1, 2), while the Myštěves hoard contained one shorter axe with a rectangular socket and a slightly fan-shaped broadened blade (Fig. 4:7). Axes with a circular to oval socket are rare in the northern and eastern Alpine area (see e.g. Horváth 1969, kép 6:5; Dušek, Dušek 1995, Taf. 115:12, 14; 116:1, 14; Studeníková 2000, 66; Čambal, Makarová 2020a, 207, 218, 219, Fig. 6:15; 7:15). Their distinct concentration can be, on the contrary, observed in Poland (especially in its western part), where they appeared throughout the Hallstatt period as components not only of grave assemblages but also of hoards. Although most of their finds date to Ha D, their occurrence in Poland is already reliably documented to Ha C (Gedl 1991, 31, 32; 2004, 60–65, Taf. 13:144–146; 14:15; 16:183–188; 39A; Derrix 2001, 53, Abb. 16; Gediga et al. 2020, 76; Michnik, Dzięgielewski 2022, 107–108).

The axe from Myštěves (Fig. 4:7) can be included in a large group of iron, relatively massive socketed axes of the northern Alpine type, which have a rectangular socket and usually attain a length in the range of 9–12.5 cm (Parzinger 1995, 68). Axes of this type were widespread from eastern France through southern Germany to Moravia and northwestern Slovakia up to eastern Slovakia, and from Saxony, western Poland, and Silesia to Upper Austria. Most of them are isolated finds, some come from hoards and sporadically from graves and settlements (see Parzinger 1995, 68, 268, Abb. 23:4; Studeníková 2000, 66–69; 2007, Abb. 7:3, 4; Gedl 2004, 65–67, Taf. 16:189–198; Benediková 2014, 19, 20, with references, obr. 3; Michálek et al. 2015, 125, obr. 8:3; Michálek 2017, tab. 302:7; Novák 2017, 208, 209, with references; Michnik, Dzięgielewski 2022, 107; Golec et al. 2023, 10, 11, with references). Northern Alpine-type socketed axes are among the Hallstatt period artefacts with weak chronological sensitivity – the heyday of their occurrence undoubtedly corresponds to Ha D, within which a finer chronology cannot be established. Their earliest specimens, however, are positively attested already in Ha C2. Their survival into the Early La Tène period is

documented by axes whose blades are more fan-shaped in comparison to the Ha D axes (see e.g. Parzinger 1995, 68; Gedl 2004, 66; Fröhlich et al. 2011, 142; Müller 2012, 224; Dzięgielewski et al. 2020, 228, with references; Golec et al. 2023, 10, 11).

### 3.3 Jewellery and clothing accessories

The hoard from Velká Ledská contained two cast bronze enclosed anklets (Fig. 5:1, 3) and a bronze pin preserved in fragments (Fig. 5:2). Both anklets are of the saddle-shaped type of annular jewellery. They are characterised by a C-shaped cross-section and decoration by broad vertical rounded ribs interlaid with pairs of fine ribs at regular intervals. The closest parallels to the anklets from Velká Ledská come from southern Bavaria from graves dated to Ha D1 (Nagler-Zanier 2005, 92, 93, 169, 170, Taf. 88:1679–1682, 1684, 1685; 89:1686, 1687; 207B). They are a foreign element in east Bohemia. Worn in pairs, the south Bavarian anklets form part of a small southeastern German group of saddle-shaped anklets characterised by various cross-sections and relief decoration, usually in the form of groups of grooves or ribs in combination with grooves. Within this group of annular jewellery, dated in general to Ha C – Ha D1, specimens with a C-shaped cross-section belong to the developmentally later variant (see Nagler-Zanier 2005, 89–95, 169, 170, Taf. 85–89; 90:1693–1704; 207A; 207B). Bronze saddle-shaped anklets are a typologically diverse group of circular jewellery that was widespread almost exclusively in the Western Hallstatt culture – primarily in Bavaria and Upper Austria, with their occurrence concentrated in Ha C and overlapping into Ha D1 (see e.g. Stöllner 2002, 82; Nagler-Zanier 2005, 89–98, 169, 170; Siepen 2005, 128–132, Taf. 81–88). Finds of iron saddle-shaped anklets are also sporadically known from south Moravia from contexts dated to Ha C2b – Ha D1a, as well as from western Poland from hoards dated to Ha C1b – Ha C2a (see Dzięgielewski et al. 2020, 229; Kos a kol. 2022, 141, 142, obr. 52).

The bronze pin from Velká Ledská is another foreign element in the east Bohemian Hallstatt culture milieu. It belongs to the type with a double spiral head whose neck and the lower part of the arms of both spirals are hammered flat. This pin type was widespread in the Hallstatt period in Poland, mainly in Wielkopolska and Kuyavia, in contexts dated to Ha D (see e.g. Gedl 1991, 88, Abb. 46:15, 16; Tribala-Zawiślak 2012, 82, 165, tab. 35:7; 2020, Fig. 5; Maciejewski 2019b, 20–34, ryc. 1; 4; 5; 6:c–g; 23). Outside the territory of Poland, finds of pins with a double spiral head and a hammered neck sporadically appear in central Moravia (see Golec, Fojtík 2020, 112, obr. 36:31), northern Slovakia (e.g. Novotná 1980, 162–164, Taf. 47:1097–1104; Benediková 2014, 24, 26, obr. 7:11),<sup>8</sup> Transdanubia (e.g. Říhovský 1983, 54, Taf. 26:652, 653), and their easternmost finds come from the Middle Dniester region in Ukraine (Mogilov 2020, 151, 153, rys. 10:42–44).<sup>9</sup>

Another jewellery hoard from east Bohemia comes from Stičany. In addition to the annular ornaments – at least 13 bronze bracelets or anklets and 5 bronze neck-rings/pectoralis – the hoard contained one bronze loop, almost 200 pieces of bronze clamps and 3 amber beads. The hoard of bronze artefacts from Stičany has recently been studied in detail (see Jiráň et al. 2023) and therefore is not discussed further here. The authors of the publication date the hoard to the end of the Ha D1 and suggest its association with the cultural milieu of central and north Moravia.

### 3.4 Tools

Only the Myštěves hoard also contained three iron tools – a knife with a tang (Fig. 4:5), a wedge-shaped anvil (Fig. 4:8), and an incompletely preserved sickle (Fig. 4:6). Iron knives with

a tang – being one of the most frequent types of tools – can be found throughout Central Europe during the entire Hallstatt period and have no major cultural and chronological significance. The absolute majority of their finds come from grave assemblages and settlement features (e.g. Gedl 1991, 37; Parzinger 1995, 81; Stöllner 2002, 102, 103; Rebay 2006, 162, 163; Müller 2012, 225, 226; Kozubová 2013a, 119, 120; Makarová 2017, 72, 73; Čambal, Makarová 2020a, 218; Gediga et al. 2020, 74; Kos a kol. 2022, 144–147). On the contrary, their occurrence in hoards is not yet documented in Bohemia (with the exception of the Myštěves hoard) and Moravia. Only sporadically have iron knives been found in hoards in Slovakia (e.g. Čambal 2015, obr. 2:1–3, 5; Čambal, Makarová 2020a, 207, Fig. 5:3; 6:17; 7:19), in northern Hungary (Szabó et al. 2022, 295, 296, Fig. 14; 15; 17; 2023, 610, Fig. 8), and in Poland (Blajer 2001, 114–116, mapa 31A, 32).

Iron anvils are a rare type of find in the Hallstatt period in Central Europe. Their occurrence is associated with graves (e.g. Hallstatt / Gmunden District / AT; Kromer 1959, Taf. 44:8; 83:8), settlement features (e.g. Heuneburg bei Herbertingen-Hundersingen / Sigmaringen District / DE; Sievers 1984, Taf. 164:1839) and cave finds (Habruvka, Býčí skála Cave / Blansko District / CZ; Parzinger 1995, 81, 82, Taf. 47:419, 422; 48:423; 49:434).

Although its handle tang is not preserved and its blade is damaged in places, the incomplete iron sickle from Myštěves is most probably a specimen with a very narrow, arched blade. The shape of the Myštěves specimen most closely resembles the sickles of the not very numerous type III after E. Studeníková (2007, 56, 57), such as we know, for example, from the hoards from the Molpír hillfort in Smolenice (Trnava District / SK; Studeníková 2007, Abb. 6:7, 8), from the Nižná Myšľa hoard (Mirošayová 1980, obr. 2:1–5, 8), from Žilina-Zástranie hoard (Žilina District / SK; Studeníková 2007, Abb. 7), the Międzybrodzie hoard (Blajer et al. 2022, tabl. IV), from hoards from the hillfort at Dédestapolcsány-Verebce-bérc (Borsod-Abaúj-Zemplén County / HU; Szabó et al. 2022, 290, Fig. 9:1, 2) and from Vekerzug grave 1 from Törökszentmiklós-Surján (Jász-Nagykum-Szolnok County / HU; Csalog, Kisfaludi 1985, 317, Abb. 1:1), all dated to Ha D. The occurrence of iron sickles at sites from the Hallstatt period in Central Europe is relatively low compared to socketed axes and trunnion axes. With the exception of Poland, where grave finds are also known, the occurrence of sickles is almost exclusively associated with settlement features and hoards (see e.g. Gedl 1995, 94–103, Taf. 33–37; Blajer 2001, 108–111, mapa 28; 29; Studeníková 2007; Michálek et al. 2015, 122, with references; Gediga et al. 2020, 78; Golec, Fojtík 2020, 134, 135; Michnik, Dzięgielewski 2022, 107).

## 4. Hoards and their external find context

In addition to the hoard content, it is also important to analyse their external find context, which includes different levels of spatial relations. The studied topics may include the form of the find situation, including the arrangement of the objects, the topographical characteristics of the site, its relationship to other archaeological components, and – in a broader context – its relationship to the period settlement landscape (see Salaš 2005, 195; Chvojka et al. 2017, 206; Salaš et al. 2020; Golec et al. 2023, 16–18).

We know very little about the actual find situations. Verifiable information about the shape and size of the features in which the hoards were deposited is completely unavailable. This may be due to their poor legibility, as such a pit was probably rapidly dug and immediately backfilled; the circumstances of discovery and the limited extent of the revision excavations may also have played their part. In each case, we only have data on the depths of deposition of the objects from the present-day

Hoard	Landform	Height above sea level (m)	Distance from the water source (rounded to tens of metres)	Finding context	Spatial relation to the settlement region	Dating
Černíkovice	Top of a hill	348	230	Out of context	Border zone	Ha C – Ha D
Konecchlumí	Steep slope	330	280	In the vicinity of the hilltop settlement	Border zone	Ha C1b – Ha D
Myštěves	Slight terrain wave	253	380	Out of context	Border zone	Ha D2 – Ha D3
Stičany	Slight terrain wave, terrace	244	540	In close relation to the lowland settlement	Within	Ha D1
Velká Ledská	Steep slope	321	220	In the vicinity of the hilltop settlement	Border zone	Ha D1

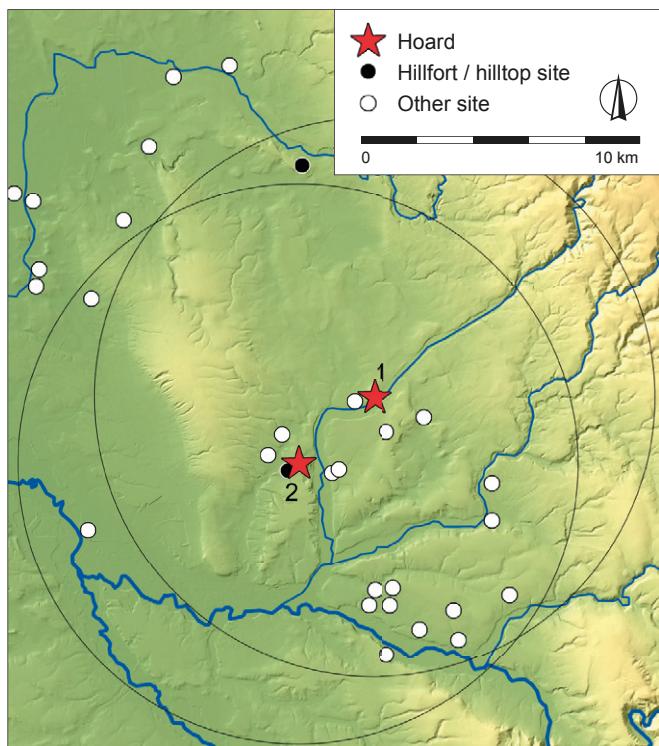
**Tab. 1.** Hallstatt period hoards in east Bohemia. Overview of chronological, topographic and settlement-geographic aspects of the sites with evidence of hoard deposition.

**Tab. 1.** Depozyty z doby halštatské ve východních Čechách. Sumarizace chronologických, topografických a sídelně geografických aspektů poloh s doklady deponování.

surface, which in each case varied between 20 and 40 cm. We are somewhat better informed about the manner in which the objects were arranged, although even here we are mostly reliant on oral accounts or sketches by the finders and subsequent reconstructions. The objects were mostly grouped in a cluster in a small area. The spread of some objects over a wider area around the core of the hoard described in the case of the assemblages from Myštěves (Fig. 2:II) and Velká Ledská can be attributed to post-deposition transformation processes. The Černíkovice and Konecchlumí assemblages make it possible to form a more precise idea about the possible spatial arrangement. In both cases, the hoards consisted of pairs of axes, which were reportedly placed in the ground and arranged in a V-shape with the blades crossed (Fig. 2:I). The core of the Velká Ledská hoard consisted of an anklet onto which a pin was wound.

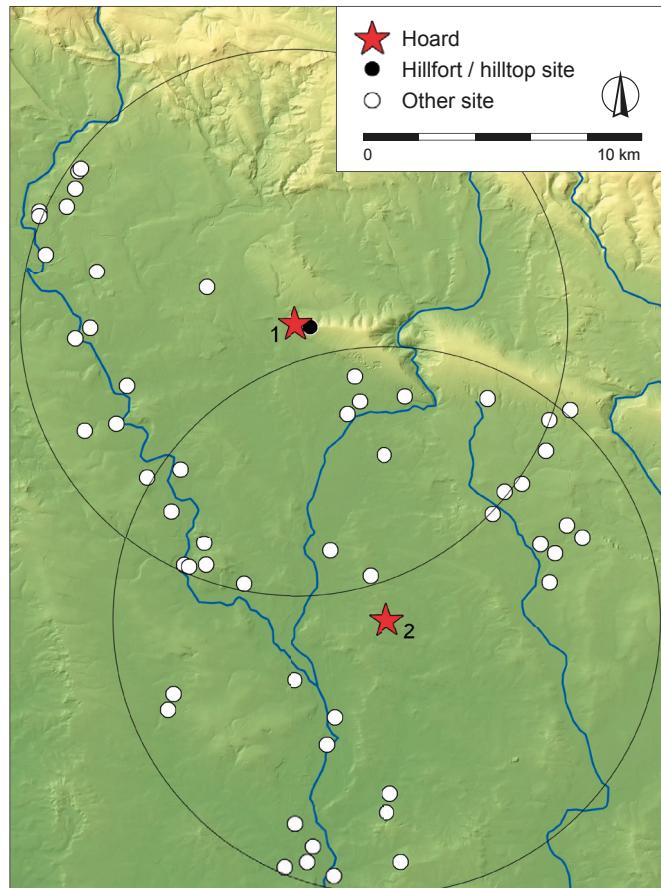
In terms of topography, the Hallstatt period hoards of east Bohemia were located in various landscape configurations (Tab. 1). The Myštěves and Stičany hoards were deposited in the open lowland landscape, on slight terrain waves. In the case

of the assemblages from Konecchlumí and Velká Ledská, the sites chosen for hoard deposition were on steep slopes of prominent elevated ridges. The hoard from Černíkovice was found on the top of a hill. The relationship of hoards to water sources is another important aspect of topography. It should be stressed, however, that the data available to us, which are not sufficient in number, are based only on the present-day hydrology. This may cause certain distortions due to the possible disappearance or alteration of the course of some streams. The results should therefore be treated with caution. The recorded distances to the nearest stream or spring are always in the order of a few hundred metres. It can therefore be concluded that at the moment the east Bohemian hoards do not reveal an immediate and interpretable link to water sources.



**Fig. 8.** Hallstatt period hoards in the context of contemporary settlement. Sites within a radius of 10 km were mapped. 1 – Černíkovice (Rychnov nad Kněžnou District); 2 – Velká Ledská (Rychnov nad Kněžnou District). Base map ČÚZK. Input data by M. Beková, Z. Bláhová; graphic by T. Mangel.

**Obr. 8.** Depozyty z doby halštatské v kontextu soudobého osídlení. Mapovány lokality v okruhu o poloměru 10 km. 1 – Černíkovice (okr. Rychnov nad Kněžnou); 2 – Velká Ledská (okr. Rychnov Nad Kněžnou). Mapový podklad ČÚZK. Data M. Beková, Z. Bláhová; grafika T. Mangel.

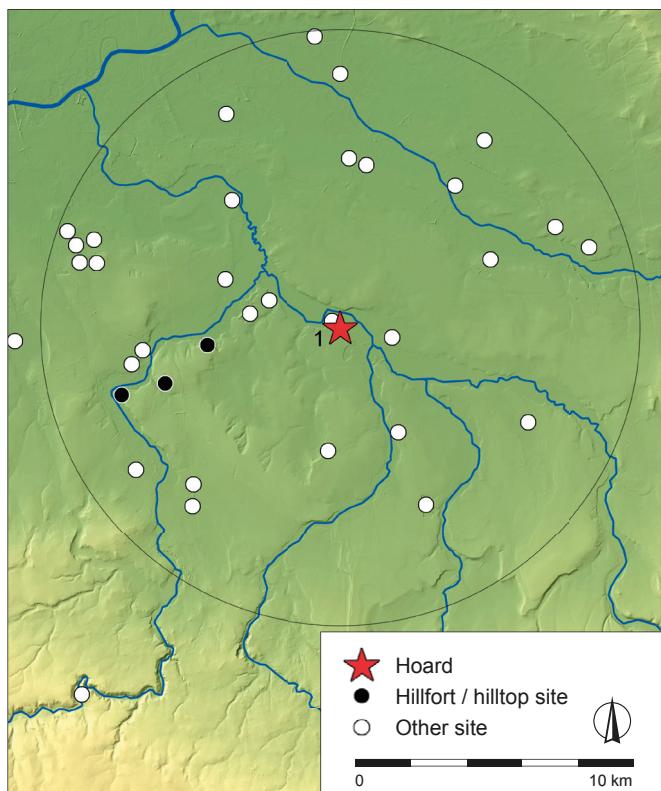


**Fig. 9.** Hallstatt period hoards in the context of contemporary settlement. Sites within a radius of 10 km were mapped. 1 – Konecchlumí (Jičín District); 2 – Myštěves (Hradec Králové District). Base map ČÚZK. Input data by M. Novák, L. Novotná; graphic by T. Mangel.

**Obr. 9.** Depozyty z doby halštatské v kontextu soudobého osídlení. Mapovány lokality v okruhu o poloměru 10 km. 1 – Konecchlumí (okr. Jičín); 2 – Myštěves (okr. Hradec Králové). Mapový podklad ČÚZK. Data M. Novák, L. Novotná; grafika T. Mangel.

Most of the hoards were deposited outside the areas of the period residential and burial sites. The only exception is the hoard from Stičany, which was discovered within or in close proximity to a contemporaneous lowland settlement (Jirán et al. 2023, 277, 296). In other cases, a connection to the surroundings of highland settlements can be observed. The hoard from Konecchlumí is evidently related to the Hallstatt period hillfort of Hůra, about 500 m away (Vokolek, Vencl 1974; Ulrychová 2005, 252–253). The hoard from Velká Ledská was discovered in close proximity to the fortification of the hillfort dated on the basis of a few pottery fragments to the Late Bronze Age (Novák 2008, 109, tab. 1). It should be added, however, that recent isolated and as yet unpublished metallic finds from the inner area of the hillfort also testify to activity during the Hallstatt period; it is currently impossible to unequivocally define the nature and extent of the site's occupation during this period.

In order to trace the relationship of the hoards to the settlement landscape, settlements within a 10 km radius around the spot of the hoard deposition were mapped (Fig. 8–10; Tab. 1). All hoards come from locations closely related to settled areas; they are not documented in unsettled areas. They were discovered in different parts of east Bohemia, representing separate settlement regions (cf. Venclová ed. 2008, obr. 9 for the overall distribution of Hallstatt period sites in east Bohemia). Within these settlement groups, the sites of hoards are regularly associated with their boundary zones. The hoard from Stičany is again an exception in this respect. It was the only one deposited within the settlement area, in the places where the presence of a long-distance travel corridor connecting east Bohemia with the territory of Moravia is assumed (Venclová ed. 2008, 84, obr. 94; Martínek 2019, 50, mapa 4).



**Fig. 10.** Hallstatt period hoards in the context of contemporary settlement. Sites within a radius of 10 km were mapped. 1 – Stičany (Chrudim District). Base map ČÚZK. Input data by T. Jošková; graphic by T. Mangel.

**Obr. 10.** Depozyty z doby halštatské v kontextu soudobého osídlení. Mapování lokalit v okruhu o poloměru 10 km. 1 – Stičany (okr. Chrudim). Mapový podklad ČÚZK. Data T. Jošková; grafika T. Mangel.

## 5. A brief overview of hoard deposition evidence in the surrounding regions of Central Europe

As already mentioned in the introduction, finds of hoards also come from other areas of Central Europe. Widening the perspective will thus allow us to place the study of hoard deposition practices of east Bohemia in a broader cultural and geographic context. Poland is a specific area in terms of Hallstatt period hoard deposition, as more than three hundred certain or probable cases of hoard activities are now registered there (Blajer 2001; Westhausen 2019a). Most of them come from the northern part of the current Polish territory, where the older indigenous cultural tradition of the Lusatian Urnfield cultures persisted. In contrast, in the territories of Silesia and southern Greater Poland, which were strongly influenced by the Hallstatt culture (Gediga 2011; Dzięgielewski et al. 2020), their evidence is scarce. Thanks to the large number of hoards, certain differences can be identified even in diachronic terms (cf. Blajer 2001, 289–297). In Poland – unlike other areas – hoards are more common in Ha C. This period is characterised by a higher share of assemblages consisting exclusively of jewellery (49%) or a combination of jewellery and other functional categories (40%). The share of hoards composed of tools and/or weapons is also relatively high (11%). This dropped to a mere 2.4% in the following Ha D, along with a decrease in the proportion of combined hoards (11%) and a significant increase in the number of assemblages composed purely of jewellery, which are represented in over 85% of cases. Hoards containing metal vessels now newly appeared and represented 1% of cases. Variations are also observed in the use of the individual metals. The dominant role in the hoards was undoubtedly played by bronze objects. In contrast, hoards combining iron and bronze objects or containing exclusively iron artefacts are in the minority. Moreover, hoards of purely iron objects (whether consisting of jewellery or tools/weapons) occur almost exclusively in Ha C (Ha C1b – Ha C2), especially in the areas immediately adjacent to the aforementioned Hallstatt zone in southwestern Poland. Their occurrence is only sporadic in the following Ha D (Dzięgielewski et al. 2020, 233, 235).

Hoards are also a relatively more frequent phenomenon in the Eastern Hallstatt culture. The geographically closest area with ample evidence of hoard deposition is Central Moravia (Golec, Fojtík 2020, 200–204; Golec et al. 2023, 13, 16, Fig. 1, Suppl. 3). This area is also culturally close to east Bohemia, as both are characterised by manifestations of the Platěnice culture/group. However, unlike east Bohemia, hoards in the Moravian Platěnice culture/group milieu are more frequent and also differ in their compositional profile. The vast majority of the 19 cases are represented by hoards predominantly of annular jewellery.<sup>10</sup> The presence of amber and glass components of necklaces is also more frequently documented in these hoards. Hoards made up of metal vessels and other artefacts associated with feasting occur, though only sporadically. In contrast, hoards of iron tool/weapon assemblages are marginal and are documented in only a single case from Náměšť na Hané (Olomouc District; Kalábek, Duřepk 2021). The peak of hoard deposition in Moravia occurred in Ha D1 – Ha D2 with possible isolated cases of continuity into Ha D3 (Golec, Fojtík 2020, 202).

In contrast to the numerous finds from central Moravia, the map of south Moravia – occupied in the period by the Horákov culture/group – is essentially empty. A single hoard is mentioned, supposedly discovered at the site of Diváky-Burberk (Břeclav District). It allegedly consisted of bronze annular jewellery, and glass and amber beads, all stored in a ceramic vessel (Čižmář, Čižmářová 2014, 53, footnote 2). However, neither the finds nor the find context can be verified and thus information about the hoard is of little value.

A great deal of evidence on Hallstatt period hoard deposition is available from Slovakia, almost exclusively from the western half of its territory,<sup>11</sup> from which 18 reliably interpreted hoards come (see Dubec 2023, obr. 3; 4, with references; for the hoards from the Spiš region, see Javorský 1982; Benediková, Soják 2021; Kozubová et al. 2022b). The territory of present-day Slovakia is a considerably heterogeneous region from a culture-geographical perspective. In the southern parts of western Slovakia, the period of Ha C – Ha D1 is characterised by the occupation of regional groups of the Eastern Hallstatt culture (including the Kalenderberg culture/group, and the group of the central and northeastern part of Transdanubian), and of the Vekerzug culture throughout Ha D (see e.g. Stegmann-Rajtár 2009, 84, obr. 13; Kozubová 2013a). The regions lying to the north, including the Central Váh region, Kysuce, Orava, Liptov, the Central and Upper Hron regions as well as Spiš, can be attributed to the Lusatian cultural area throughout the Hallstatt period (see e.g. Miroššayová 1992; Benediková 2014, 26–29; 2016, 67). With the exception of the Ha C1a hoard from Nitrianská Blatnica-Marhát (Piešťany District; Ondrkál 2020), the custom of hoard deposition is mainly associated with Ha D in the western half of Slovakia (see more Dubec 2023).<sup>12</sup> Hoards from the Hallstatt culture sites in southwestern Slovakia are dated to Ha D1 – these include six hoards from the Molpír hillfort in Smolenice (Trnava District) and one from Buková/Smolenice-Záruby (Trnava District; see Čambal, Makarová 2020a; 2020b). In contrast, hoards from sites associated with the Lusatian cultural sphere consisted of objects used over a longer time and can thus be dated, as a rule, only more broadly to Ha D (see Čaplovič 1987, tab. 27:2, 3, 7; 28:9; 39:1–6; 40; 49; 50:1–4, 7; Benediková 2004, 108, 112; Studeníková 2007, Abb. 7:1–7; Kozubová et al. 2022b).<sup>13</sup> In terms of the representation of individual categories of objects and their combinations, two types of hoards are documented in Slovakia. The first includes hoards containing only one functional category of objects: bronze, and sporadically also amber jewellery and clothing accessories (Čaplovič 1987, tab. 27:2, 3, 7; 28:9; 39:1–6; 40; Pieta, Veliačík 2014; Čambal, Makarová 2020b), iron axes/tools (Javorský 1982; Čambal, Makarová 2020a, Fig. 8; Benediková, Soják 2021), or iron weapons (Kozubová et al. 2022b). All hoards from Spiš fall into this first group. A larger group in Slovakia is mixed hoards, which contained a combination of iron tools and bronze jewellery/clothing accessories, occasionally supplemented by iron ingots (Čaplovič 1987, tab. 49; 50:1–4, 7; Studeníková 2007, Abb. 7:1–7; Čambal, Makarová 2020a, Fig. 4–7; 9). Hoards containing a horse harness (Čambal, Makarová 2020a, Fig. 3) or metal vessels (Novotná 1991, Taf. 13; 14; Ondrkál 2020) occur only rarely.

The territory of Transdanubia – one of the areas of the Eastern Hallstatt culture – is characterised by the presence of several regional groups – the Hallstatt culture groups of the northern and central part of Transdanubia, akin to south Moravia, Lower Austria, and Burgenland, formed the groups of the northeastern Alpine area, while the southern and southwestern part of Transdanubia, along with Styria, Carinthia, Slovenia, and Slavonia, are classified in the Hallstatt culture groups of the southeastern Alpine area (see e.g. Patek 1993, 47–139; Rebay 2006, 257, 258). After a relative boom in deposition practices in the Late Bronze Age (e.g. Metzner-Nebelsick 1997, 93, 94; 2002, 71, 72), in the Hallstatt period we observe a decline in the number of hoards in Transdanubia – for the time being, six hoards are known concentrating in Ha D (Fekete 1999; Nagy et al. 2012; Sooš et al. 2023). Four of them have been found in northwestern Transdanubia (Ikervár-Pinkóci-dűlő / Vas County, Ravazd-Kisravazd / Győr-Moson-Sopron County, Somló-hegy / Veszprém County,

Vaskeresztes or Magyarkeresztes / Vas County;<sup>14</sup> Mozsolics 1942, 155–161, kép 1; t. XV; Fekete 1973, 342–348, Abb. 2–7; Patay 1990, 75, Taf. 49:126; Nagy et al. 2012, pl. 2; 3:3; 4; 5; 8:2; 11:2, 4, 6; 12; 13; Soós et al. 2023, 131, Fig. 6–10), the remaining two hoards come from its southeastern part (hoard I from Kurd / Tolna County, Regöly-Szárazdi bozót / Tolna County; Patay 1990, 74–78, Taf. 47:124; 51–62; 63:141; Fekete 1995). With the exception of the hoard from Kurd, which was the only one to contain only bronze vessels, all of the Transdanubian hoards are characterised by the presence of bronze jewellery and especially clothing accessories (fibulae) associated with the female sphere. These occurred in the hoards both alone (Kisravazd, Regöly) and in combination with either bronze vessels (Vaskeresztes) or iron tools (Somló-hegy). The Late Hallstatt period hoard from Ikervár is specific in that it is the only one coming from a settlement context. It consisted of a combination of fibulae, a bronze strainer, another bronze vessel, and tools.

No Hallstatt period hoards are known thus far from the territory of Lower Austria and Burgenland, which were occupied by the Kalenderberg culture/group (Rebay 2006, 258, Abb. 241).<sup>15</sup> Hoards are only sporadically documented further south, in Styria and Carinthia, where hoards from the turn of Ha B3 and Ha C1, or from Ha C, contained several functional categories of bronze objects (jewellery and clothing accessories, axes and weapons, tools, and vessels), which were usually intentionally damaged (Tomedi 2002, 337). Among these, the hoards from Wildon, Styria (Leibnitz District) and Fließ, Tyrol (Landeck District) – both of the Bologna / San Francesco – Šempeter type hoards (see below) – indicate at least the partial affinity of these regions with hoard deposition practices characteristic of the North Adriatic area (Müller-Karpe 1959, 283, Taf. 144a; Sydow 1995; Turk 2018, 398–400). Similarly, to Lower Austria and Burgenland, there are no multiple-piece hoards in Upper Austria and the Salzburg Region, which culturally belong to the Western Hallstatt culture. The sporadic occurrence of monodeposits, often fluvial, from Ha C – Ha D1 points to the similarities of the western part of Austria with the Hallstatt regions lying further west (see e.g. Stöllner 2002, 37; Westhausen 2019a, 285, Abb. 4–6).

On the contrary, the deposition of hoards is commonly documented in the southeastern Alpine groups of the Hallstatt culture in Slovenia. In its western part, two heavily represented types of hoards are documented during the Hallstatt period. They differ not only in the preference for certain categories of objects, but also in the choice of metals. Hoards of the first type, referred to as the Bologna / San Francesco – Šempeter (near Nova Gorica / SI) type, contained bronze, usually fragmentarily preserved objects, among which shaft-hole axes clearly prevail. Additionally, they also contained weapons, tools, jewellery, and clothing accessories as well as various semi-finished objects. The objects from these hoards chronologically cover a wide range spanning the 9th–8th and 6th–5th centuries BC. The occurrence of the hoards in question is clearly linked to settlements – from northern Italy to western Slovenia – and are probably indicative of long-standing hoard deposition practices of used and highly fragmented artefacts (see Turk 2018, 398–400, 403, Fig. 1; 3; Teržan 2021, 244). Hoards of the second type, referred to as the Tržišče-Porpetto type, contained a large number of iron weapons, among which spearheads clearly prevail. Axes and single-edged swords are less common. In addition to these, bronze weapons, horse harnesses, and components of armour were sporadically found in the assemblages. Individual hoards of this type date from the late 8th to the mid-6th century BC. Unlike the hoards of the first type, they were situated close to

contemporary settlements. These hoards of a distinctly male nature are documented precisely in those parts of *Caput Adriae* where weapons, horse harnesses, and armour were not customarily put into graves. The deposition of such a large number of weapons may have been related to a local form of *tropaion* (see Turk 2018, 400–404, Fig. 2; 3; Guštin, Božić 2021; Teržan 2021, 244, 245).

A completely different situation can be observed in the areas lying west of east Bohemia, culturally classified in the Western Hallstatt culture. No more than three other assemblages, which can be, albeit sometimes with caution (Michálek 2017, 505–507; Jiráň et al. 2023, 296), considered hoards come from the rest of Bohemian territory. They all come from the areas of the Hallstatt Tumulus culture in southern Bohemia. Two of them are assemblages of iron tools and/or weapons from Třebanice (Prachatice District) and Vrážec/Zlivice (Písek District) and are dated to Ha C2 – Ha D1/D2 (Michálek et al. 2015; Půlpán et al. 2022, 10, tab. 3). As far as jewellery hoards are concerned, there is only the assemblage from Spolí (Český Krumlov District) consisting of bronze rings and a glass bead and dated to Ha D2 – Ha D3 (Chytráček et al. 2015; Chytráček et al. 2017a). No hoards are known from west, central or northwest Bohemia.

In the more westerly areas, between Bohemia and the Rhine, the deposition of hoards in the form of assemblages of finished products was equally rare (cf. Stein 1979, 219, Abb. 1; Westhausen 2019a, Abb. 4, 5). They can only be found in some specific areas such as Switzerland. However, even there, hoards in the form of complete assemblages of jewellery, weapons or tools appear only sporadically and only during Ha D (Dunning 2007; Westhausen 2019b). In contrast, a kind of specific hoards consisting of iron bipyramidal ingots is common in the western parts of Central Europe. They occur mainly in territories of southwestern Germany, Switzerland, and eastern France. Most of them have no datable find context or accompanying finds. With rare exceptions, therefore, these assemblages were in the past dated only on typological grounds, usually to the La Tène period (overview in Mangel 2012, 251–252, obr. 3; Senn et al. 2014, 147–150). However, the results of radiocarbon dating show that this sweeping chronology is not sustainable, and at least some of them can be dated to the Hallstatt period (Berranger 2014, 115–116; Bauvais et al. 2017, 301, Fig. 5).

## 6. Discussion

Some of the results of the study of east Bohemian Hallstatt period hoards can be set in a broader context. The activities related to their deposition (Tab. 1) undoubtedly place them in phases Ha D1 (Stičany, Velká Ledská) and Ha D2 – Ha D3 (Myštěves). It is not possible to state unequivocally whether these activities could have taken place slightly earlier as well. For some of the hoards such a possibility is not ruled out, though it cannot be confirmed. As a matter of fact, the assemblages can only be dated to the broad time span of Ha C1b – Ha D (Konecchlumí) and Ha C – Ha D (Černíkovice). In three cases, the east Bohemian hoards consist exclusively of iron tools and/or weapons, accompanied in the Myštěves case by a horse bit. The remaining two hoards contain mainly bronze annular jewellery and other clothing accessories as well as amber beads in the case of the Stičany hoard from Ha D1.

The composition of the east Bohemian hoards reveals some specific characteristics, although their interpretation is still hindered by the low number of documented cases. Based on the current state of knowledge, we seem to be dealing with a relatively high number of assemblages consisting of iron tools/weapons. This sets east Bohemia apart from the rest of

Central Europe, where, if hoards of finished products are recorded at all, they either have a completely different composition (Slovenia, southern Germany) or they are jewellery hoards or hoards in which jewellery combinations with tools and/or weapons are absolutely dominant (Moravia, Hungary, Poland, Slovakia). A similar situation is also recorded in south Bohemia, but again with a generally low number of known cases. We are not yet able to explain this phenomenon unambiguously, but it is clearly based on several levels. For the sake of completeness, we should take into account the methodological aspects, which would, however, mean that, e.g. the strategies of searching for hoards differ fundamentally between Bohemia and Moravia. This is unlikely. Let us therefore focus our attention instead on other possible domains – chronological and cultural-geographical aspects. In the first case, we should mention the higher representation of iron hoards in Poland during Ha C1b – Ha C2 (Blajer 2001, 289–293, ryc. 46; Dzięgielewski et al. 2020). The more frequent occurrence of hoards of iron objects in east Bohemia or even south Bohemia could mean that their deposition already took place during Ha C. Some assemblages do not rule this out. A final possibility is an explanation based on the specific cultural and geographical position of the east Bohemian Platěnice culture/group, which occupies a position at the intersection of the Eastern and Western Hallstatt areas and, moreover, developed on the cultural substrate of the Lusatian Urnfield cultures (for this, e.g. Filip 1936–1937, 87–106; Venclová ed. 2008, 15, 17, 29, 84–97). In any case, this issue requires a complex study beyond the scope of this paper and will be developed in the future.

The hoards presented in this article have another important dimension to them. East Bohemia is a region relatively poor in nonceramic finds from the Hallstatt period (e.g. for the burial evidence, see Vokolek 1999). However, these finds play a crucial role in the study of interregional contacts. The presented assemblages thus provide us with a unique opportunity to expand our knowledge in this respect as well. East Bohemia's openness to foreign influences and its cultural contacts with neighbouring areas are demonstrated in particular in the Myštěves and Velká Ledská hoards containing objects whose centre of distribution is located either in the territory of the Vekerzug culture in the east, in the Western Hallstatt culture in the south and southwest, or to the north in western Poland. The horse bit of the Szentes-Vekerzug type and the Vekerzug-type battle axe from Myštěves (Fig. 4:3, 4) are unique not only within the east Bohemian context, but also in the whole of Bohemia and Moravia. However, these are not the only finds in east Bohemia that illustrate contacts with the Vekerzug culture in the Hallstatt and Early La Tène periods. The same eastern influence is clearly indicated by snake-shaped temple rings of types I and II after A. Kozubová, bronze triblade and trilobate-triblade arrowheads with an inner socket of A. Kozubová's types I and II and their variants, wheel-turned pottery or a bone object decorated in animal style from Mikulovice – V Loučkách (Pardubice District). The occurrence of cowrie shells can also be related to the activities of the Vekerzug culture (see Kozubová et al. 2022a, 275–306, 313–317, Abb. 13; Fundliste 1:4, 6, 19A, 19B, 19C, 22, 24, 26, 34, 37A, 37B, 37C, 39B). The finds of the Vekerzug culture are concentrated in the regions in the northern half of Bohemia and their occurrence can be dated only broadly to the Ha D and LT A stages (Kozubová et al. 2022a, 304, 306).

The saddle-shaped anklet from Velká Ledská from Ha D1 (Fig. 5:1, 3) is a new addition to the small group of jewellery and clothing accessories documenting cultural contacts of east Bohemia with the territories of the Western Hallstatt culture.

While the occurrence of parallels to the rings from Velká Ledská is limited to Bavaria (see above), the cast melon-shaped bracelets from Pěčín (Rychnov nad Kněžnou District) and Úhřetice (Chrudim District) are a popular type of annular jewellery widespread mainly in southern Germany, Upper Austria, and south and west Bohemia in Ha C and Ha D1/D2 (see Mangel 2010, 264, 265, with references, obr. 2; 3). The group in question is further represented by finds of Late Hallstatt period fibulae – fibulae with a decorated foot/*Fußzierfibeln* and bossed fibulae/*Paukenfibeln* were widespread in the Western Hallstatt culture territories mainly in southwestern Germany (see Vencl 1967; Vokolek, Sankot 2001; Trefný 2016, 146–148, 151, with references, obr. 4:1; 6:1).<sup>16</sup> The pin with a double spiral head and hammered neck from Velká Ledská (Fig. 5:2) and the axes with a circular socket from Černíkovice (Fig. 3:1, 2) are types of objects whose origin and/or main distribution territory is located in the western part of Poland (see above). An iron sickle from Nová Ves near Bakov (Mladá Boleslav District) with its end bent at a right angle could also point to contacts of the Platěnice culture/group environment in a northerly direction (Vokolek 1999, 89, tab. 60:15). This is a type of sickle whose primary distribution territory is in Poland, with their finds mainly concentrated in the area from Lusatia through Greater Poland to Upper Silesia (Derrix 2001, 81, 214, 215, Abb. 40:1). Outside this area, they are also documented from the northern regions of Slovakia (Benediková, Soják 2021, Abb. 2–4). The Stičany hoard plays a special role in terms of assessing the possible interregional contacts of east Bohemia. The objects of which the hoard consisted are unknown in the local environment and parallels to them are seen in both the Eastern and Western Hallstatt environments (see more Jiráň et al. 2023).

Although the primary aim of this article was not to address the question of the meaning of hoard deposition in either a profane or ritual sense, we will nevertheless touch on it at the end and add a brief commentary on the facts that emerged from the spatial analysis of their external find context. Unfortunately, information on the arrangement of objects within the find situations and on the relationship of the hoards to the topography of the landscape cannot be currently interpreted, given their number and the nature of available information. However, this is not the case of the relationship of the hoards to the settlement and social landscape. The majority of these hoards were deposited outside contemporary settlements or burial grounds, although in two cases in closer association with hilltop settlement sites. The most interesting finding, however, appears to be the fact that four of the five east Bohemian hoards were deposited at the interface of settled and unsettled areas. Studies in recent years show that similar locations of hoards are in no way exceptional. Evidence of hoard deposition at the boundary of a settled territory, and sometimes also in connection with hillforts, can be repeatedly observed in other regions for which we have the appropriate data. For the Late and Final Bronze Age, this phenomenon has been described in detail in Moravia, with some finds pointing to its continuation in later periods, including the Hallstatt period (e.g. Salaš 2017; Salaš et al. 2020, 50–52, obr. 15; Mirová, Fojtík 2021; Golec et al. 2023, 17). The presence of hoards on the borders of selected settlement regions and micro-regions has been repeatedly demonstrated in northern Poland (Maciejewski 2016). Last but not least, we can mention the south Bohemian hoards from Spolí (Český Krumlov District; Chytráček et al. 2017a, obr. 17) and from Třebanice (Prachatice District; Michálek et al. 2015, 125, obr. 13), which again show a link not only to contemporary highland settlements, but also to the border zones of settlement areas.

For the Hallstatt period, we still lack evidence of the so-called *hoard fields* (see e.g. Salaš 2007; Salaš, Jarůšková 2017; Mirová, Fojtík 2021, 17) documented for the Late and Final Bronze Age. Nevertheless, the regularity in the use of boundary zones for hoard deposition is striking. Its recurrence in different areas shows that it represents a universal and intentional behaviour associated with the perception and organisation of the landscape at that time. Boundary zones were repeatedly sought out as sites for ritual acts. This is suggested not only by the recurring similar landscape configurations of their deposition sites, but also by recurring, albeit somewhat regionally determined, patterns in their composition. The exact nature of these rituals is unknown. However, the links between hoards and boundaries suggest that it is to be sought in terms of symbolic behaviour reflecting the territorial perception of the landscape by the communities of the time (Maciejewski 2016; 2019a).

## 6. Conclusion

The fact that hoards were deposited in east Bohemia during the Hallstatt period is a relatively new discovery that contributes significantly to an understanding of cultural development in the region. Currently, there are five assemblages that can be classified in this category and it can be assumed that their number will grow in the future. It appears that the deposition of multiple-piece hoards, similar to the culturally related Platěnice culture/group of central Moravia, was a natural part of the life of the communities of the east Bohemian Platěnice culture/group in Ha C – Ha D1 and continued during the subsequent Late Hallstatt period. The distinction between the two geographical groups is thus no longer a matter of presence/absence of hoards, but can be seen in their frequency and content.

The deposition of hoards in the territory of east Bohemia undoubtedly occurred during Ha D. The question of whether this activity was already pursued during Ha C is not satisfactorily resolved at the moment, although some assemblages do not rule out this possibility. Issues related to some specific aspects of the composition of the east Bohemian hoards are also not satisfactorily resolved. These consist in the more frequent occurrence of hoards composed of iron tools and weapons, which, despite the (thus far?) low number of cases, distinguishes the region to some extent from most other Central European areas with evidence of hoard deposition. The reasons for this phenomenon can probably be sought in chronological or cultural geographical terms. In the future, we may hope to get a deeper understanding of this issue should Central European Hallstatt hoard deposition be studied in a broader context, but also if more local hoards are discovered and studied. This is also important for deepening our knowledge of interregional connections, since it is the hoards that can provide invaluable evidence in this regard in areas with a low presence of metallic finds in both grave and residential contexts – such as the east Bohemian Platěnice culture/group. Some of the objects from the studied hoards clearly show that during the Hallstatt period, east Bohemia was involved in a wide network of connections with areas to the west, east, and north.

The analysis of the relationship of hoard deposition sites to other archaeological components in the landscape also yielded important results. It is evident that not only in east Bohemia, but also in some other Central European areas, sites on the margin of settled areas were chosen for these purposes. This repeated deposition of hoards on the boundaries of settlement regions is probably related to the symbolic aspects of territoriality of Early Iron Age communities.

## CRediT authorship contribution statement

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## Notes

- 1 Some of them were found before 2014, but for a long time they remained in the possession of the finders, thus escaping the attention of researchers.
- 2 Although solitary finds can also be a manifestation of intentional deposition practices (e.g. Vencl 1967; Mangel 2010; 2012; Mangel et al. 2023), the intentionality of the deposition of these objects is in most cases difficult to prove and therefore we have set them aside for the time being.
- 3 The following abbreviations were used in the catalogue: h. = height; l. = length; w. = width.
- 4 Two assemblages can be mentioned in this category. The first is a set of bronze rings and multi-layered eye beads found in 1912 in Lípa (Hradec Králové District; Domečka 1914; Venclová ed. 2008, 135). The other is a find of two annular jewels discovered in 1905 in Rusek (Hradec Králové District; Vokolek 1999, 145).
- 5 On battle axes of type I, cf. Kozubová, Fojtík 2021, 81, with references, Abb. 16.
- 6 Another two axes are of variant II3 with a tubular shaft hole and discoid butt (see Kozubová 2010, 55, obr. 10:3, 3a).
- 7 With a possible overlap into Ha D3 (see Půlpán et al. 2022, 10, with references).
- 8 A more precise chronological classification, namely to Ha D, is possible only in the case of the Istebné-Hrádok hoard (Dolný Kubín District; Benediková 2004, 103, 108).
- 9 Burial mound 3 from Teklivka/Teklívka (Chortkiv Raion / UA) is dated to the second half of the 7th century BC. The occurrence of pins with a double spiral head and hammered neck in the Western Podolian group is associated with cultural influences from Central Europe (Gutsal et al. 2011, 104, 106, 107).
- 10 This number does not include the arbitrarily construed and recently questioned 'hoard from Uherské Hradiště' (Hlava 2017).
- 11 An exception is the hoard from Nižná Myšľa in southeastern Slovakia (Košice-okolie District; Miroššayová 1980).
- 12 It is unclear whether some of the iron artefacts from Trenčianske Teplice (Trenčín District), allegedly coming from the Čvirigovec hillfort, can be attributed to a hoard. The artefacts are dated to the Ha B3 – Ha C1 (see Čambal 2015).
- 13 An exception is to be made for the hoards from Nitrianske Rudno-Predný Rokoš (Prievidza District) dated to Ha C2 – Ha D1 and

from Sklabinský Podzámok-Katova skala (Martin District) dated to Ha D1 – Ha D2 (Pieta, Veliačik 2014; Dubec 2023, 44, 45). Hoards from the Spiš region can be dated only broadly to the Hallstatt period – this concerns the hoards from Hrabušice-Pod Zelenou horou and Letanovce-Čertova sihoť (both Spišská Nová Ves District; Benediková, Soják 2021).

- 14 The assemblage of artefacts from Vaskeresztes/Magyar-keresztes is plagued by unclear find circumstances (Mozsolics 1942; Patay 1990, 75).
- 15 The dating of the hoard from Großweikersdorf (Tulln District) to the beginning of the Hallstatt period is disputed (Metzner-Nebelsick 2002, 72). In contrast, the jewellery hoard from Thunau am Kamp (Horn District) is dated by M. Lochner (1998–1999, 184) to the Late Bronze Age; however, based on the bronze circular perforated pendants with a double cross, a dating to the Hallstatt period appears more likely (see Golec, Kos 2020, 75, footnote 3).
- 16 The handle of a bronze vessel from Úhřetice (Chrudim District; Vokolek 1999, tab. 134:3; Trefný in print) may also have originated in the area of southwestern Germany and the Salzkammergut in Upper Austria.

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## Resumé

Nástup časné doby železné je ve velké části střední Evropy provázen silnou redukcí dokladů ukládání depotů. Tento jev je obvykle dáván do spojitosti se společenskými a ideologickými změnami, k nimž docházelo na území nově se formujícího halštatského kulturního světa. K oblastem, v nichž bylo ukládání depotů kovových artefaktů opuštěno úplně, se donedávna řadily též východní Čechy. Nově získaná data ovšem vypovídají o opaku. Kromě již dříve publikovaného depotu ze Stíčan (Jiráň et al. 2023) dnes disponujeme informacemi o dalších čtyřech souborech, které naleží do uvedené kategorie nálezů (obr. 1). Depoty z Černíkovic (obr. 3:1, 2), Konecchlumí (obr. 2:I; 3:3, 4) a Myštěvsi (obr. 2: II; 4) byly tvořeny výlučně železnými nástroji a/ nebo zbraněmi (čakan, sekery s raménky, sekery s tulejí, srp, nůž, kovadlinka), v případě Myštěvsi doprovázenými navíc koňským udidlem. Depot z Velké Ledské (obr. 5) obsahoval bronzové kruhové šperky a další oděvní doplňky. Obdobné složení měl též již zmíněný soubor ze Stíčan, jenž obsahoval navíc jantarové korály.

Z kulturně-chronologického vyhodnocení obsahu depotů vyplývá, že aktivity spojené s jejich ukládáním se nepochyběně pojí s fázemi Ha D1 (Stíčany, Velká Ledská) a Ha D2 – Ha D3 (Myštěves). Zda k nim docházelo i o něco dříve, nelze jednoznačně konstatovat. Část depotů takový pohled nevylučuje, ale prokazatelná tato alternativa není. Jde totiž o soubory, které lze datovat pouze rámcově do širších chronologických úseků pokrývajících Ha C1b – Ha D (Konecchlumí) a Ha C – Ha D (Černíkovice). Některé předměty z dosud nepublikovaných depotů navíc poskytují oporu pro studium nadregionálních kontaktů. Depot z Myštěvsi obsahoval část udidla typu Szentes-Vekerzug (obr. 4:4) a čakan typu II (obr. 4:3) Hlavní oblast rozšíření těchto typů předmětů se kryje s prostředím vekerzugské kultury v Karpatské kotlině (obr. 6, 7). Sedlovité nánožníky z Velké Ledské (obr. 5:1, 3) doplňují nepočetnou skupinu šperků a součástí oděvu, která dokládá kontakty východních Čech s oblastmi západohalštatské kultury. Jehlice s dvojitou spirálovitou hlavicí a roztepaným krčkem z Velké Ledské (obr. 5:2) a sekery s tulejkou kruhového průřezu z Černíkovic (obr. 3:1, 2) patří k typům předmětů, jejichž těžiště výskytu leží v západní části Polska. Specifické postavení z hlediska nadregionálních kontaktů pak zaujímá depot ze Stíčan. Paralelně k předmětům, které obsahoval, jsou spatřovány jak ve východo, tak v západohalštatském kulturním prostředí (Jiráň et al. 2023).

Ve srovnání s většinou dalších středoevropských území s doklady deponování jsou východní Čechy nápadně častějším zastoupením souborů tvořených železnými nástroji/militarii. Obdobný obraz v současnosti poskytují pouze Čechy jižní. Počet známých depotů je ovšem v obou oblastech stále příliš nízký, aby bylo možno tuto skutečnost jednoznačně interpretovat. Příčiny mohou spočívat jak v rovině metodické, tak v odlišné chronologii deponování či ve specifickém kulturně-geografickém postavení regionu.

Na základě vyhodnocení aktuálních dat o prostorových vztažích východočeských depotů ke krajině a k dalším komponentám halštatského osídlení vyplynulo, že k jejich ukládání byla ve většině případů volena místa na hranicích osídlených oblastí (obr. 8–10; tab. 1). Studie z posledních let ukazují, že obdobné umísťování depotů není ojedinělé. Doklady deponování na hranicích osídlení lze opakovat pozorovat v dalších regionech i v jiných obdobích (např. Maciejewski 2016; 2019a; Salaš 2017; Salaš et al. 2020, 50–52, obr. 15; Mírová, Fojtík 2021; Golec et al. 2023, 17). Pravidelnost tohoto jevu vypovídá o jeho intencionální a univerzální povaze. Souvislosti mezi depaty a hranicemi naznačují, že vysvětlení je třeba hledat v rovině symbolického chování, které odraží teritoriální vnímání krajiny tehdejšími komunitami (Maciejewski 2016; 2019a).

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