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CONTACT BETWEEN THE EASTERN BALTICS AND BOHEMIA IN THE BRONZE AGE? NORTYCKEN TYPE BATTLE-AXE FROM THE HOARD IN OLEŠNÁ, SOUTH BOHEMIA

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This paper focuses on a unique Nortycken-type bronze battle-axe recently discovered as part of the Late Bronze Age hoard (Br D – Ha A1) at the site Olešná in Southern Bohemia. The battle-axe probably originates from the Eastern Baltic or Northern Poland, where similar artifacts are primarily dated to Period I-III of the Bronze Age. The possible role of this artifact in Southern Bohemia remains in question. The Nortycken-type battle-axe was likely imported over a considerable distance, but there is no evidence of a connection to local Bronze Age elites. The archaeological record does not indicate the presence of such elites in the region of Southern Bohemia (Czech Republic).

Keywords: South Bohemia, Late Bronze Age, battle-axe, import, trade, elemental composition analysis

Šiame straipsnyje aptariamas unikalus Nortikėnų tipo bronzinis kovos kirvis, neseniai rastas vėlyvojo bronzos amžiaus lobyje (Br D–Ha A1) Olešnos vietovėje Pietų Bohemijoje. Kovos kirvis greičiausiai patekęs iš rytinio Baltijos regiono arba Šiaurės Lenkijos, kur panašūs dirbiniai datuojami bronzos amžiaus I–III periodu. Nors klausimas, kokia buvo šio dirbinio paskirtis Pietų Bohemijoje, lieka neatsakytas, tikėtina, kad Nortikėnų tipo kovos kirvis buvo atgabentas iš šiaurinių Europos regionų. Sunku pasakyti, ar kirvis priklausė vietinio elito bendruomenei, nes Pietų Bohemijos regiono archeologiniai duomenys yra nepakankami socialinių struktūrų rekonstrukcijai.

Reikšminiai žodžiai: Pietų Bohemija, vėlyvasis bronzos amžius, kovos kirvis, importas, prekyba, elementų sudėties analizė

INTRODUCTION[1]

The Bronze Age represents an epoch of significant interconnection among nearly all European regions (Harding, 2013; Nessel, Neumann, Bartelheim, M. (eds), 2018; Maran et al., 2020; Kristiansen, 2023), as demonstrated by the numerous imports of raw materials, products, ideas, innovations, and, not least, the migration of people.[2] This is no different in the Eastern Baltic as best illustrated by the production and trade of metal during the Bronze Age (Čivilytė, 2016a; 2016b; Vasks, 2016). Amber represents the most obvious link between this region and Central Europe, primarily evidenced by

[1] The article was supported by the Grant Agency of the Czech Republic, reg. no. 23-06940S.
[2] See the girl from the famous Danish site Egtved (Bergerbrant, 2019).

the abundance of finds of this raw material.[3] While there is limited evidence of other contact between Bohemia and the Eastern Baltic, the discovery of a Nortycken-type battle-axe[4] in Southern Bohemia is especially unique in that regard. The find has already been preliminarily published in Czech (Chvojka, Jiráň, Metlička et al., 2017, 109–118, Tab. 116–123; Chvojka, John, 2018). Thus, this article aims to try to explain how a Nortycken-type battle-axe made its way to Southern Bohemia.

LOCALIZATION AND FINDING CIRCUMSTANCES OF THE HOARD FROM OLEŠNÁ

In the spring of 2012, a hoard of metal artifacts was discovered by unknown finders near the South Bohemian village of Olešná. The find was subsequently handed over to the South Bohemian Museum in České Budějovice in the summer of the same year. This collection of artifacts was unearthed in the vicinity of the village of Olešná, situated in the Písek district of the South Bohemian region, approximately 2 km west of the village center. Unfortunately, the precise location of the hoard could not be determined, but it is believed to be in the area near the confluence of the Vltava River and an unnamed stream, forming a distinctive promontory (see Fig. 1).[5]

The find was retrieved from the ground without comprehensive documentation. According to unverified reports, all the metal artifacts were found within two ceramic vessels. One of these vessels contained only ingots, while the other contained all the remaining artifacts. On November 3, 2012, a detailed detector survey and microprobing were conducted in the vicinity of the find under the supervision of O. Chvojka. However, no further prehistoric artifacts were uncovered in the entire promontory area. This suggests that the hoard was deposited outside of contemporary settlements or burial sites. Nevertheless, it is worth noting that a substantial settlement from the Bronze Age has been well-documented within the Olešná area (see Chvojka, Fröhlich, 2014).

BASIC CHARACTERISTICS OF THE HOARD FROM OLEŠNÁ

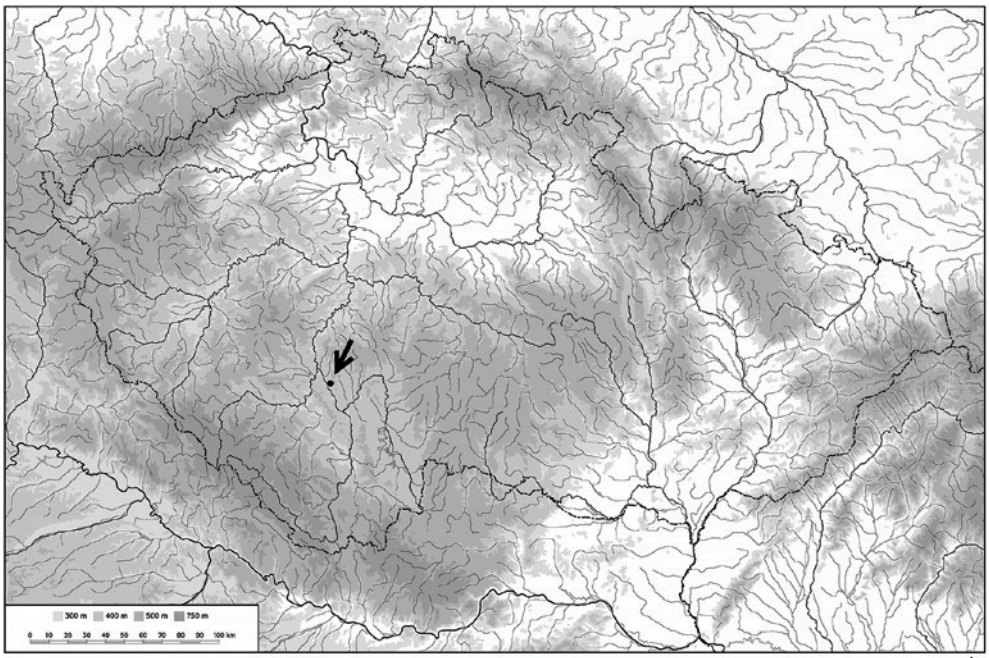
The hoard contained a total of 190 metal artifacts, either bronze or copper, selectively shown in Figure 2. These items were stored in two ceramic vessels: a completely preserved double-conical vessel and only the bottom part of a storage vessel (Chvojka, Jiráň, Metlička et al., 2017, 109–118, Tab. 116–123). Among the bronze artifacts, two nearly intact cups stand out, but the majority of the metal objects consisted of fragments, including jewelry, tools, and weapons, as well as ingots (42 pieces weighing a total of 8,820 g). The total weight of all metal artifacts in the hoard is 13,810 g.

Due to the nature of the assemblage, which falls into the category of so-called hoards of fragments (Hansen, 1994, 360; Kytlicová, 2007, 6–7; Falkenstein, 2011), typically found in Bohemia during the earlier phase of the Late Bronze Age (Br D – Ha A1, i.e., ca 1300–1100 BC: Jiráň et al., 2013, 150, Tab. 4), the find from Olešná can be dated to this period. This dating is supported by the presence of many artifacts typical of this era. These include two bronze cups

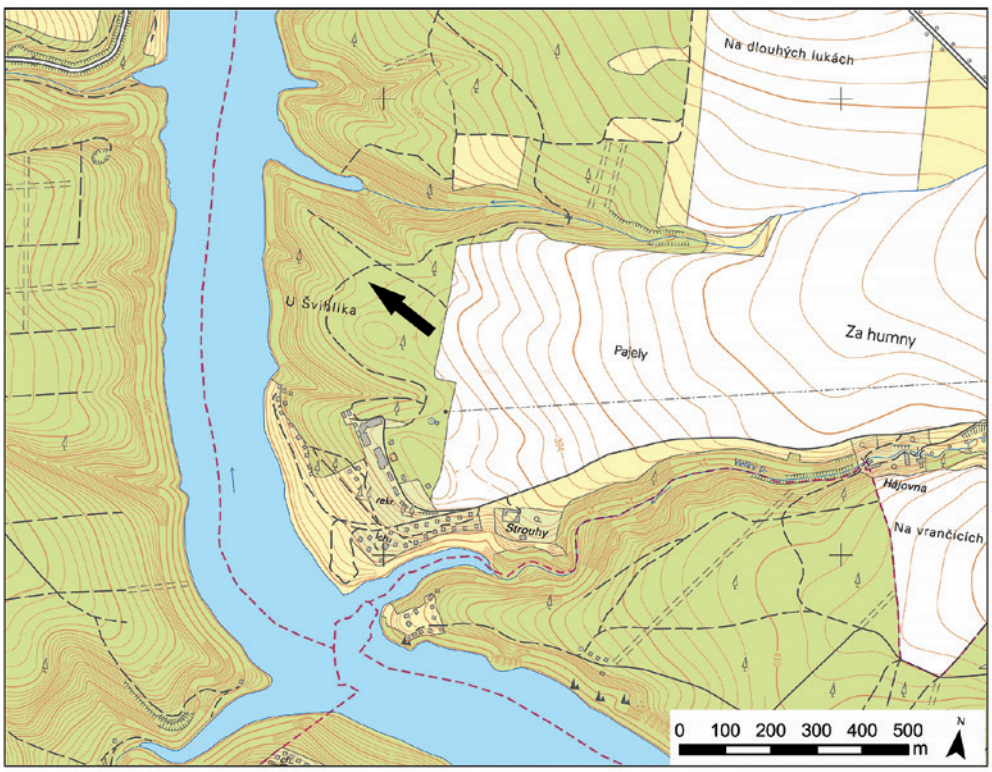
[3] For Bohemia, see Ernée, 2012; Tisucká, Ohlídalová, 2013; Chvojka et al., 2017. Amber finds in the Bronze Age are very rare in the Eastern Baltic region itself (Čivilytė, 2016a; 2016b).

[4] In the article, we use the term "battle-axe" without implying its original purpose. The absence of traces of use, as well as the finding circumstances of the "hammer-axe" from Olešná, unfortunately do not contribute to a closer interpretation of this type of artifact, which could, however, have both a practical role as well as a social and symbolic or ritual role.

[5] The approximate coordinates of the site are 49.3454797N, 14.2825111E.



A



B

Fig. 1. Olešná. Location of the hoard with the Nortycken type battle-axe on the map of Bohemia (A; map base by M. Ernée) and on the detailed base ZM 1:10.000 (B). The approximate location of the find is marked with an arrow.
1 pav. Olešna. Lobio su Nortikėnų tipo kovos kirviu vieta Bohemijos žemėlapyje (A; M. Ernée žemėlapio pagrindu) ir detaliajame žemėlapyje M 1:10 000 (B). Apytikslė radimvietė pažymėta rodykle.

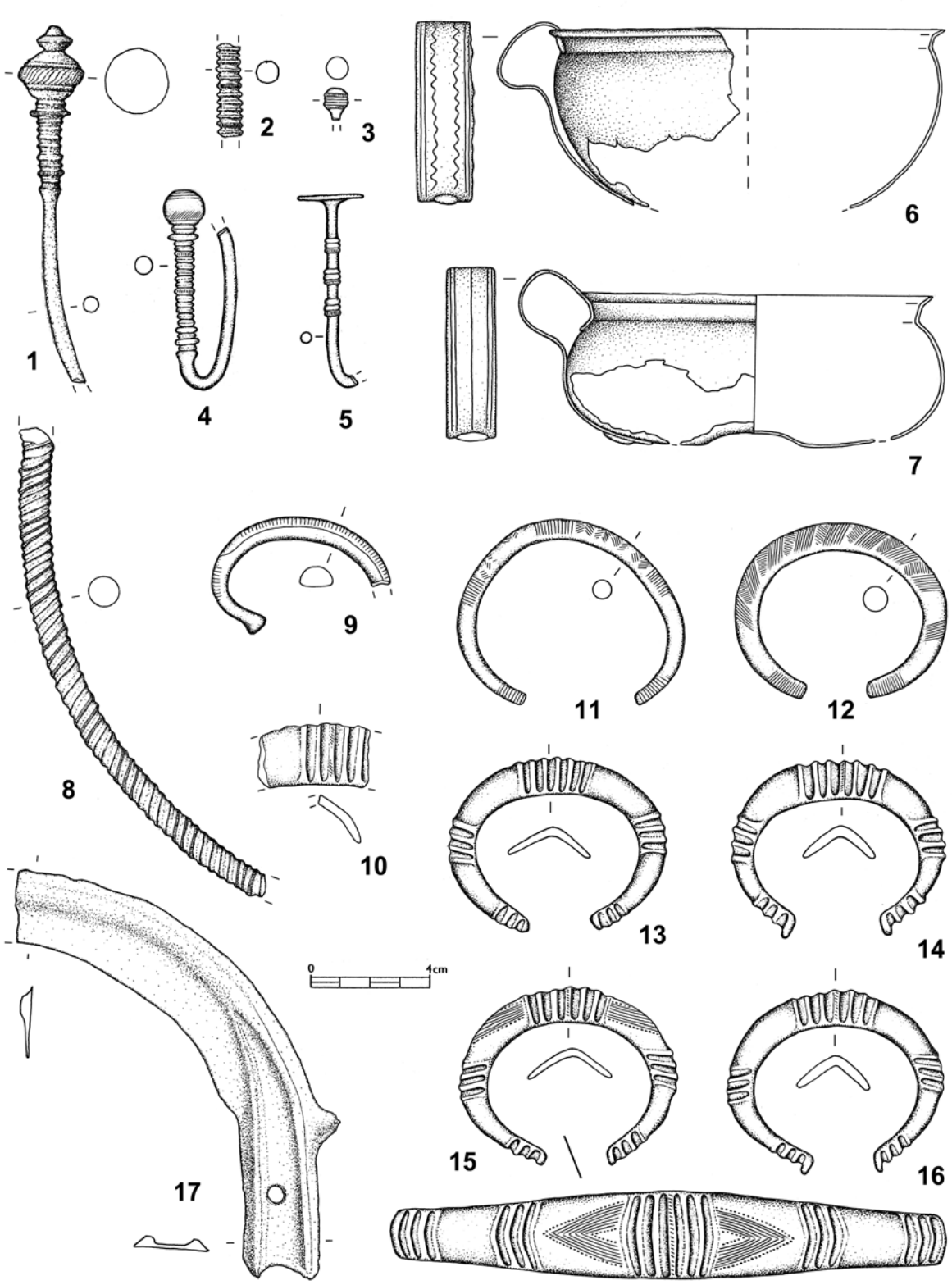


Fig. 2. Olešná. Selection of artifacts from the hoard. *Drawing by T. Kolegar and J. Bumerl.*
2 pav. Olešna. Dalis lobio dirbinių. *T. Kolegar ir J. Bumerl piešinys.*

of the Friedrichsruhe type (Fig. 2:6–7; cf. Kytlicová, 1991, 22–41), a Weitgendorf-type pin (Fig. 2:5; cf. Müller-Karpe, 1959, 189, Abb. 23:2; Kytlicová, 2007, 15–16), pins with spherical or biconical heads and richly profiled necks (Fig. 2:1–4), as well as a set of cast bracelets with a roof-like cross-section, decorated with bundles of transverse and oblique grooves, known in Bohemia as belonging to the Dřetovice type (Fig. 2:10, 13–16; Kytlicová, 2007, 42–43). Evidence of Bohemia's contacts with the Southern German and Alpine regions at the beginning of the Late Bronze Age, during the so-called Riegsee horizon (Holste, 1953, 91–95, Abb. 11, Taf. 22; Koschik, 1981, 126–139, Abb. 13–14), includes the presence of massive cast bracelets with a planconvex cross-section, reinforced ends, and an outer surface decorated with transverse grooves or ribs, framed by an outer circumferential groove (Müller-Karpe, 1959, Abb. 23; Kubach-Richter, 1990, 234–245). This includes a fragment found in the hoard in Olešná (Fig. 2:9). The chronological framework of the hoard from Olešná aligns with the above-mentioned context and is not contradicted by the presence of the battle-axe itself.

NORTYCKEN TYPE BATTLE-AXE

Among the mostly fragmentary metal artifacts of the hoard from Olešná, one fully preserved object stands out, which, at first glance, distinguishes itself from all the other finds within the assemblage. Namely, the Nortycken-type battle-axe (Fig. 3). The body of this battle-axe is of rectangular cross-section, widening in the middle, and features a transverse circular hole in its widest part. Both sides of the battle-axe are adorned with four parallel grooves, separated by ribs, with the two outermost and the middle grooves embellished with small transverse notches. In the broadest part of the body, these lateral grooves are interrupted by two transverse grooves, between which there is again a rib decorated with notches. Examination of the manufacturing marks, clearly visible under the microscope, indicates that the lateral grooves were finished through hand working, resulting in parallel lines on the cast's surface (Fig. 4). Without experimental verification, it is challenging to ascertain the specific tools and techniques employed, which may have included engraving or filing, for instance.

The upper and lower surfaces of the battle-axe remain undecorated. The back significantly widens into a lens-shaped head with a distinct, separate canopy. The cutting edge, running parallel to the central hole, displays a distinct fan-like shape. The edge itself is not sharpened and consists of a flat 2-3 mm wide section with no clear traces of wear, which might correspond, for example, to battle damage.

The battle-axe is 165 mm in length, 30 mm wide in the central part, the diameter of its central hole is 20 mm, its cutting edge is 57 mm high, and weighs 280 g. The dark green, sometimes even black patina, is only locally developed with the natural bronze color predominating. The surface exhibits the effects of corrosion and small cavities resulting from the presence of air bubbles during the casting process.

TYPOLOGICAL-CHRONOLOGICAL ANALYSIS

The battle-axe from Olešná is unmatched in the Czech Republic, except for an obviously modern forgery found in a museum in Slavkov in Moravia (Stuchlík, 1988, 317). As such, parallels to this battle-axe are primarily found in Northern Europe, especially in present-day Northern Poland, Northern Germany, Denmark, Southern Sweden, and the Eastern Baltic regions.[6] These battle-axes were first

[6] See Fig. 5; Gedl, 2004, 44.

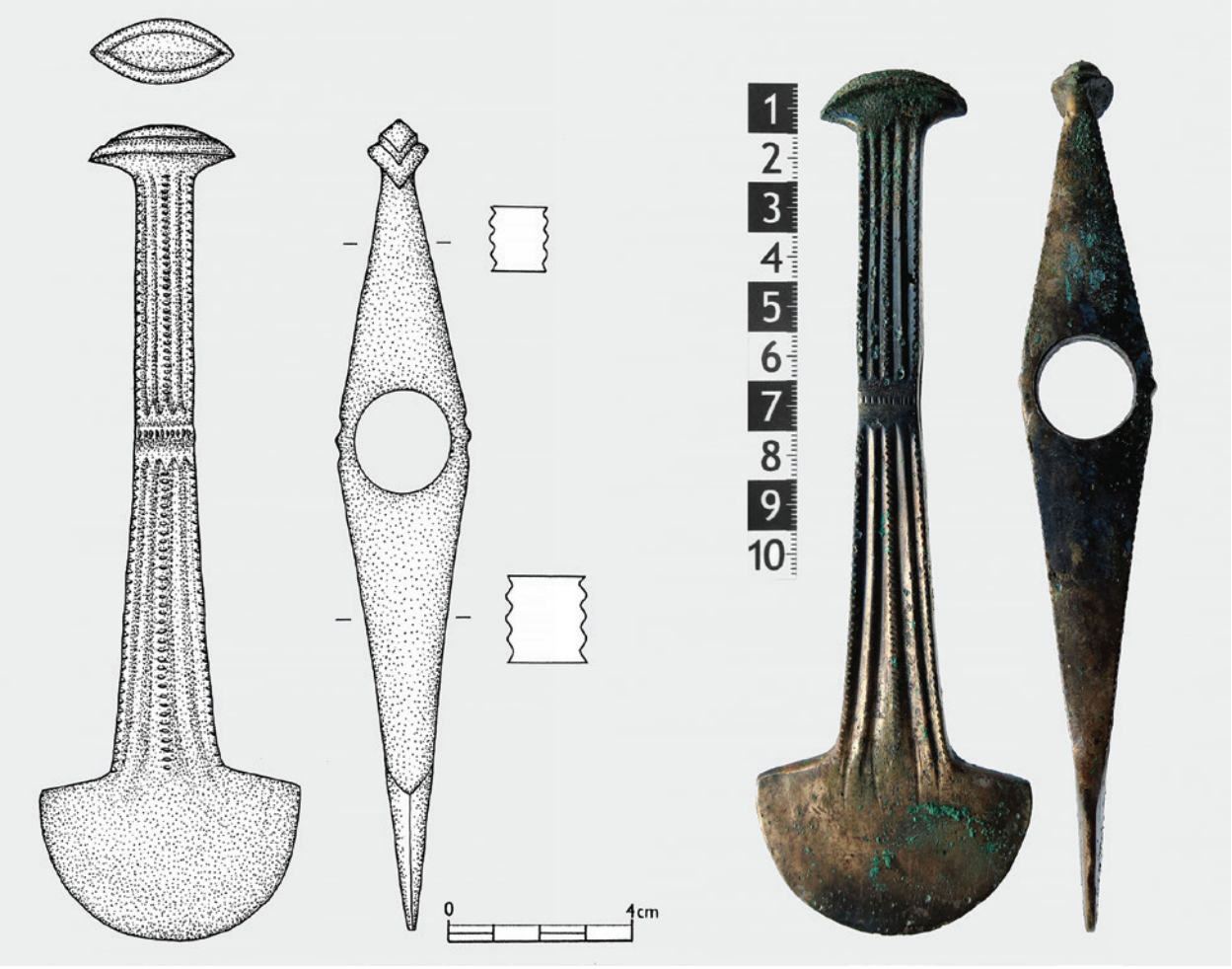


Fig. 3. Olešná. Battle-axe of Nortycken type. *Drawing by L. Bílý, photo by J. John.*
3 pav. Olešna. Nortikėnų tipo kovos kirvis. *L. Bílý piešinys, J. John nuotrauka.*

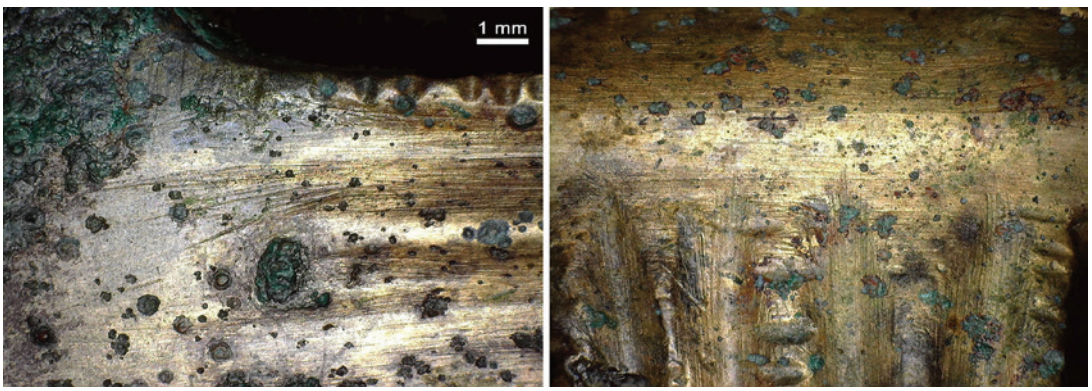


Fig. 4. Olešná. Detail of working marks at the outlet of the side grooves towards the cutting edge (left) and the back of the battle-axe (right). *Photo by J. John.*
4 pav. Olešna. Darbinių žymių detalė ant šoninių griovelių link pjovimo briaunos (kairėje) ir užpakalinės kovos kirvio dalies (dešinėje). *J. John nuotrauka.*

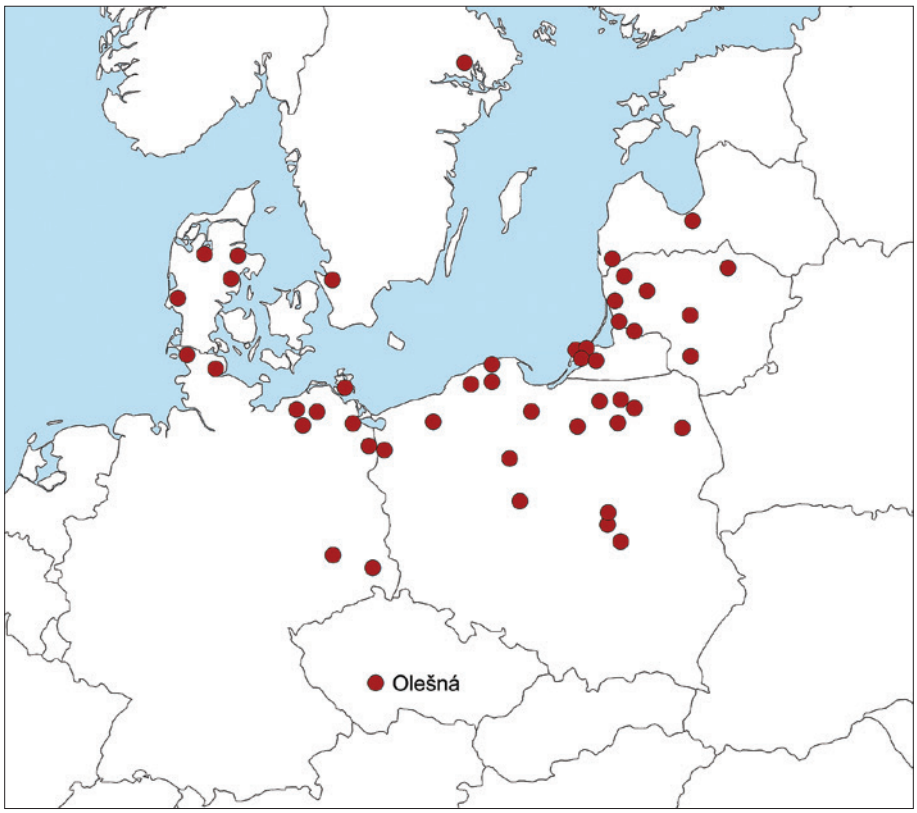


Fig. 5. Territorial distribution of Nortycken-type battle-axes. After J. Dabrowski (1968, map 5), M. Gedl (2004, Taf. 36B), and A. Čivilytė (2014, 95, Fig. 6).
5 pav. Teritorinis Nortikėnų tipo kovos kirvių pasiskirstymas. Pagal J. Dąbrowski (1968, žem. 5), M. Gedl (2004, Taf. 36B) ir A. Čivilytė (2014, 95, Fig. 6).

extensively discussed by H. Arbman, who named them after a hoard containing at least two dozen of these battle-axes (Arbman, 1933, 4). He sought to trace their origin to Central European battle-axes with transverse tules from the Middle Bronze Age, which underwent transformation in Northern Europe according to local traditions, resulting in larger specimens of the Nortycken type (Arbman, 1933, 5, 18).

In terms of decoration, Nortycken battle-axes can be divided into two groups: those from the more eastern regions (Poland, Eastern Baltic) are adorned solely with embossed grooves on the side edges, while the ones from the west (i.e., from Northern Germany, Denmark, and Sweden) occasionally feature richly engraved decoration on the upper and lower surfaces, with some also equipped with a short button decorated at the mouth of the hole (Arbman, 1933, 13–14). While the lengths of the western battle-axes typically fall between 169–187 mm and their widths range from 46–51 mm, the eastern ones average only 160 mm in length and 44–64 mm in width (Dabrowski, 1968, 44).

Although the designation of the battle-axe type originates from a hoard, most of the Nortycken-type battle-axes were discovered in burial mounds (Arbman, 1933, 7–8). More recent literature also reports several examples from hoards or as isolated finds (e.g., Gedl, 2004, 41–43). In Latvia, no bronze battle-axes have been recovered from graves; most

have been found in hoards or as single objects (Vasks, 2008, 32). In the Eastern Baltic region, the majority of these battle-axes were found in hoards (52 pieces), isolated finds (16 pieces), and only five specimens discovered in graves. It is worth noting that hoards containing Nortycken-type battle-axes are exclusively associated with swamp and watercourse environments, underscoring the symbolic significance of these artifacts (Čivilytė, 2005, 336; 2014, 95–96). Unfortunately, the vast majority of finds from this area have been lost due to destruction during WWII (Mödlinger, 2010, 109, 115).

Most of the mentioned battle-axes were dated by H. Arbman in Period III of the Bronze Age (roughly corresponding to the Reinecke stages Br D – Ha A1), although he also mentions finds dating to the end of Period II or the transitional epoch between Periods II and III (e.g., hoard from Wiek near Schwaan in Mecklenburg: Arbman, 1933, 12–13, Abb. 7). However, these earlier specimens exhibit less arched blades and less profiled backsides than the forms from the developed Late Bronze Age (Gimbutas, 1960, 403). The same dating of the Nortycken-type battle-axes (i.e., Period III with their beginnings in Period II), is also supported by more recent publications (Gimbutas, 1960, 405; Dabrowski, 1968, 100–101; Keiling, 1987, 21; Laux, 2000, 195; Gedl, 2004, 43–44).

The origin of the Nortycken battle-axes remains questionable. According to H. Arbman, older forms of these battle-axes are primarily documented in Northern Germany (Brandenburg, Mecklenburg, Holstein), and they may have subsequently spread to the Eastern Baltic region, where most of them are found (Arbman, 1933, 18). J. Dabrowski also includes Pomerania in the area of origin for Nortycken-type battle-axes (Dabrowski, 1968, 46). Similarly, A. Čivilytė considers these battle-axes in the Eastern Baltic as imports (Čivilytė, 2009, 108; 2014, 95–96).

Based on the aforementioned analogies, the battle-axe from Olešná can be confidently identified as a younger variant of the Nortycken type, belonging to Period III of the Nordic Bronze Age, with the closest parallels found in the Eastern Baltic and Northeastern Poland. Consequently, this battle-axe aligns with the dating of the hoard from Olešná, placing it at the beginning of the Late Bronze Age.

While the possibility of recent tampering with the find cannot be completely ruled out, given the similar dating of the hoard and the battle-axe, it appears to be an unlikely coincidence. Additionally, the corrosion and soiling of the battle-axe's surface are consistent with the other objects. In our further analysis, we will, therefore, operate under the assumption that the battle-axe was deposited in prehistoric times alongside other items in the hoard.

ELEMENTAL COMPOSITION ANALYSIS

The elemental composition of the battle-axe alloy was determined using X-ray fluorescence (pXRF) analysis, and measurements were conducted with a Niton XL2 GOLDD handheld spectrometer. A sample of metal filings was collected using a 0.8 mm diameter steel drill bit from a depth of approximately 1 mm below the surface of the artifact. It is important to note that the sampling and measurement procedure employed may result in an underestimation of the tin content in the alloy (Malý, Daňa, Kapusta, 2019), and the actual content of this element may be slightly higher, possibly exceeding 10% (see Table 1).

Currently, only a few results of elemental analyses of Nortycken-type battle-axes are available in the literature. The published data, along with the results of measurements from the specimen found in Olešná, are summarized in Table 1. When interpreting these results, it is crucial to consider that the measurements were obtained using different methods and instruments, which may not be entirely

Site	Cu	Sn	Ni	Pb	Fe	As	Sb	Ag	Co	Literature
Swietlogorsk Nr. 1	88,6	13,1	traces	0,1	traces	-	-	-	-	*Dabrowski, 1968*
Swietlogorsk Nr. 2	95,3	2,4	1,7	0,2	0,3	-	-	-	-	*Dabrowski, 1968*
Nortycken	85,0	13,7	0,8	0,1	0,3	-	-	-	-	*Dabrowski, 1968*
Marscheiten	82,3	12,1	1,3	0	0,5	-	-	-	-	*Dabrowski, 1968*
Czubin Nr. 1	88,5	8,6	0,95	0,0009	1	0,23	0,26	0,005	0,19	*Drzewicz, 2003*
Czubin Nr. 2	89,4	8,6	0,004	1,25	0,07	0,02	0,26	0,1	0,04	*Drzewicz, 2003*
Gorbatovka Nr. 1	82,4	15,5	0,04	0,01	1,04	0,05	0	0,04	0,1	*Mödlinger, 2010*
Gorbatovka Nr. 2	85,4	13,8	0,34	0	0,05	0,03	0	0,01	0,04	*Mödlinger, 2010*
Patiltis	89,0	10,3	0,37	0,16	0,1	0,1	0,03	0,022	-	*Čivilytė et al., 2023*
Pietariai	86,0	12,9	0,27	0,024	0,54	0,01	0	0,008	-	*Čivilytė et al., 2023*
Olešná	**89,3**	**>9,3**	**0,29**	**0,26**	**0,09**	**0,16**	**<0,01**	**<0,01**	**0,04**	

Table 1. Overview of published analyses of the elemental composition of Nortycken-type battle-axes. Values are expressed in percentages.

compatible. Furthermore, for the specimens from the 1960s, a measurement methodology has not been published.

The elemental composition of the battle-axe from Olešná aligns well with preexisting knowledge derived from similar artifacts and its dating to Period III of the Nordic Bronze Age. While bronze with a high proportion of tin and a limited presence of other admixtures is characteristic of Periods II and III of the Nordic Bronze Age, including Nortycken-type battle-axes, later Periods IV to VI show a notable decrease in tin content and, conversely, an increase in the amount of accompanying elements such as As, Pb, Sb, and Ag (Mödlinger, 2010, 126).

Regrettably, other artifacts from the Olešná hoard have not yet undergone analysis regarding their elemental composition. Therefore, it is not possible to determine whether they differ significantly from the battle-axe. In general, however, the composition of the battle-axe does not appear to be extraordinary and approximately corresponds to values known from hoards of the Urnfield period in Bohemia (cf. Frána et al., 1997, 63–78). Consequently, based on the analysis, we cannot provide insights into the possible origin of the object, and it remains uncertain whether alternative methods, such as lead isotope measurements, would yield more information.

DISCUSSION: REFLECTION ON IMPORTS AND LONG-DISTANCE CONTACTS IN THE LATE BRONZE AGE

The battle-axe from Olešná represents a characteristic import, which means an artifact produced outside

the region in which it was found (cf. Gediga, 2007, with further literature). For many imported artifacts, however, it remains speculative whether the object was brought from another region through trade, as a gift, as plunder, part of a bride's dowry, or produced locally by a craftsman from a different area, or even if it is a locally-made item influenced by foreign styles.[7] As a general rule, raw materials not naturally occurring in a region may be considered clear imports.

In any case, the battle-axe from Olešná is indeed a foreign import, whether primary (the direct import of a finished product) or secondary (involving the arrival of a producer or external influence). Nevertheless, the question remains concerning how it was transported from its place of origin and the reason for its presence in Southern Bohemia. The reconstruction of long-distance communication routes in pre-literary eras is very problematic (Uckelmann, 2013, 407–411). Reconstructing a potential route between Bohemia and the Eastern Baltic is similarly challenging.

Generally, reconstructing prospective routes leading through the territory of present-day Poland, based on the so-called amber route, and mapping the route through which the battle-axe was transported to Southern Bohemia is not possible (cf. e.g. Tisucká, Ohlídalová, 2013, 46, Fig. 26; Bolina et al., 2021, 90–93, Fig. 53). However, it is clear that whether the artifact itself or a person with knowledge of its production was transported from such a remote area, there must have been a stable and somehow secured transport route between them.[8]

Interregional connections were only possible with the participation of a specific part of society, which was involved in the distribution of goods, new ideas, and skills (Čivilytė, 2022, 317). In particular, craft mobility and contact networks spread new ideas (Nørgaard, 2018; Čivilytė, 2022, 314). Unfortunately, we can only speculate about the possible reasons for the spread of the mentioned innovations and new ideas and economic, social, or religious thoughts (Čivilytė, 2022, 314).

The period at the end of the Middle and the beginning of the Late Bronze Age (ca mid-14th to early 12th century BC) is generally considered to be an epoch of increased trade contacts between the Eastern Mediterranean, Central Europe, Scandinavia and the Baltic regions, as shown, among other things, by the numerous finds of Baltic amber in this period in the Aegean and in Egypt, or conversely glass beads of Mediterranean origin in Northern Europe (Čivilytė, Duberow, Pernicka, 2015, 107– 109). However, during the Bronze Age, products and raw materials reached the Eastern Baltic from Central and Southern Europe, as evidenced by copper originating from the Western Carpathians, Eastern Alps, and the Banatite Belt in Romania (Čivilytė, 2014). The battle-axe from Olešná may be one of the many expressions of these lively contacts.

As aforementioned, it is plausible that the battle-axe from Olešná was originally stored alongside dozens of other typical central European artifacts in a single hoard. In Bohemian hoards of fragments, it is common to encounter these imports, whether originating from the south or north. In the Southern Bohemian region, for instance, there are numerous bronzes from the Riegsee horizon with origins in Southern German areas (Chvojka, 2006), a fragment of a pick-axe from the Holašovice hoard with analogues found in mining pick-axes in the salt mines in Hallstatt (Jiráň, 2000, 62–63; Kytlicová, 2007, Taf. 21:22), or a hoard from Zahájí containing several artifacts of southeastern origin (Chvojka,

[7] For a discussion about imitation or copy, see Sørensen, 2012; Stockhammer, 2017; Čivilytė, 2022, 314.

[8] On traveling and transport in the Bronze Age, see Uckelmann, 2013; Boroffka, 2018; Nessel, Uhnér, 2018; Maran et al., 2020; Čivilytė, 2022, 312.

2004). Late Bronze Age artifacts from Northern European areas found in Southern Bohemia are relatively scarce.

Typical Lusatian finds are absent in Southern Bohemia, with only some ceramic fragments from the Dobev settlement showing Lusatian influences (Bouzek, 1963, 77; Chvojka, 2009, 166). There is evidence of contacts with the Saxon area at the beginning of the Late Bronze Age, as indicated by axes with a bar-shaped step found in the hoards in Zbonín and Holašovice (Kytlicová, 1959, 80). A Weitgendorf-type pin from Strachovice may also be a direct import from Mecklenburg (Kytlicová, 1967, 144; Horst, 1987, Abb. 2:3; Chvojka, 2009, Tab. 86:1). Amber beads, pearls, and amber fragments found in recent years at several Southern Bohemian Late Bronze Age sites (Chvojka, John, Šálková, 2012; Chvojka et al., 2017) provide further evidence of contacts with the Baltic area or with modern day Northern Poland. In this context, the battle-axe from Olešná is another of the rare examples of northern imports in Southern Bohemia in the Late Bronze Age.

Contemplating the origins of this axe is furthermore intriguing because we still do not know whether it came directly to Southern Bohemia from the north, or was locally produced in Southern Bohemia under foreign influence. While hypotheses are the only available means for discussion, it is evident that a battle-axe transported from such a distant region must have been a remarkable artifact in Southern Bohemia.

Similar exceptional artifacts of remote and sometimes exotic origin can be found in many areas of Europe during the Bronze Age. Examples also exist in the Eastern Baltic. A unique bronze figurine, whose origin is believed to be in the region of present-day Syria, was discovered at the Šernai site in Western Lithuania. The chronological classification of this figurine is not clear. However, recent analysis indicates that it may be dated back to the 14th– 12th centuries BC, which corresponds to the above-mentioned epoch of increased contact between the Baltics and the Mediterranean (Čivilytė, Duberow, Pernicka, 2015). Other examples of rare imports in this area include bronze casting forms from Dovilai in Western Lithuania and for the so-called KAM axes from Seniochy in Southwestern Poland (Čivilytė, 2004).

Undoubtedly, the existence of a battle-axe in the hoard of Olešná would have denoted the extraordinary social status of its owner and may have played a role in the ritual sphere. Some decorated Nortycken-type battle-axes from Northern Europe are thought to be scepters. Axes depicted on Nordic rock carvings suggest a similarly ritualistic purpose (Čivilytė, 2014, 94–95).

Regrettably, the circumstances surrounding the discovery of the axe from Olešná do not allow for a more detailed interpretation of its function in this region. The questions then become: was the axe intended for an individual(s) in this region? Alternatively, was it transported through Southern Bohemia for an unknown reason then neglected in the hoard? Why was this prestigious artifact deposited as one of the few intact products in a hoard dominated by fragments and ingots?

It is worth noting that the Olešná hoard contained a diverse collection of predominantly fragmented objects, mainly of local origin, but also included objects that likely originated from the Southern German and Alpine regions (see above, Fig. 2:9), and objects of a more luxurious nature; in particular, two nearly intact bronze cups of the Friedrichsruhe type (Fig. 2:6–7). Both the battle-axe and the two bronze vessels are likely associated with the highest social strata. However, identifying a corresponding elite environment in the broader vicinity of the site is also challenging. Unlike, for example, the Domažlice region in Western Bohemia (Kytlicová, 1988), where we can find luxuriously equipped graves or elite residences from the Br D – Ha A1 period, we cannot

identify any such evidence in Southern Bohemia. This holds true in many other regions, where long-distance imports are documented, but there is no evidence of social elites, as in the Eastern Baltic (Čivilytė, 2012; Čivilytė, 2022, 317). Therefore, with the current state of knowledge, the Nortycken-type battle-axe from Olešná cannot be linked to any contemporary local elite. Alas, the story of its transport to Southern Bohemia and its role in this region remains speculative.

CONCLUSION

The discovery of the Nortycken battle-axe in the Southern Bohemian hoard in Olešná brings forth various implications for discussing long-distance contacts, imports, and the societal significance of certain exceptional Bronze Age artifacts. Its origin can be distinctly traced back to the Baltic regions or to Northern Poland, as it lacks analogues in Central Europe. Its dating aligns with other artifacts from the Olešná hoard, placing it at the outset of the Late Bronze Age (Br D – Ha A1, i.e., ca 1300– 1100 BC). The chemical composition of the battle-axe, as revealed by XRF analysis, also supports this chronological classification. Regrettably, the circumstances surrounding the discovery of the battle-axe do not provide insights into its history. Consequently, we can only speculate about the reasons for its presence in Southern Bohemia, its societal role, and the motivations for burying it alongside numerous "common" local artifacts.

English translation by authors and Petr Kos

REFERENCES

Arbman, H., 1933. Zur Geschichte der Nortyckener Äxte. *Praehistorische Zeitschrift,* 24, 3–21.

Bergerbrant, S., 2019. Revisiting the "Egtvedt girl". In: Berge, R., Henriksen, M. M. (eds). *Arteologi og kulturhistorie fra norskekysten til Østersjøen.* Festskrift til professor Birgitta Berglund. Trondheim: Museumsforlaget, 18–39.

Bolina, P. et al., 2021. Bolina, P., Martínek, J., Cílek, V., Šlézar, P., *Jantarová stezka.* Praha: Academia.

Boroffka, N., 2018. Bronzezeitlicher Transport. Akteure, Mittel und Wege – Eine Einführung in das Thema. In: Nessel, B., Neumann, D., Bartelheim, M. (eds). *Bronzezeitlicher Transport. Akteure, Mittel und Wege.* Tübingen: Tübingen University Press, 9–29.

Bouzek, J., 1963. Problémy knovízské a milavečské kultury. *Sborník Národního muzea v Praze*, A 17/2–3, 57–118.

Chvojka, O., 2004. Jihovýchodní vlivy v jižních Čechách ve střední a mladší době bronzové. In: Kazdová, E., Měřínský, Z., Šabatová, K. (eds). *K poctě Vladimíru Podborskému.* Brno: Masarykova univerzita, 327–340.

Chvojka, O., 2006. Lité bronzové náramky horizontu Riegsee. Příspěvek k počátku doby popelnicových polí v jižních Čechách. In: *Vita archaeologica.* Sborník Víta Vokolka. Hradec Králové: Muzeum východních Čech; Pardubice: Východočeské muzeum, 113–122.

Chvojka, O., 2009. *Jižní Čechy v mladší a pozdní době bronzové.* Dissertationes Archaeologicae Brunenses/ Pragensesque, 6. Brno: Masarykova univerzita.

Chvojka, O., Fröhlich, J., 2014. Okolí Olešné v pravěku. In: Křečková, J. (ed.). *Olešná v průběhu dějin.* Olešná: Obecní úřad, 36–37.

Chvojka, O., Jiráň, L., Metlička, M. et al., 2017. *Nové české depoty doby bronzové. Hromadné nálezy kovových předmětů učiněné do roku 2013.*

České Budějovice: Jihočeská univerzita; Praha: Archeologický ústav AV ČR; Plzeň: Západočeské muzeum.

Chvojka, O., John, J., 2018. Sekeromlat typu Nortycken z depotu v Olešné (okr. Písek). In: Benediková, L., Horňák, M. (eds). *Sídla, artefakty a čas...* Zborník štúdií o dobe bronzovej a dobe halštatskej k 75. narodeninám Ladislava Veliačika. Nitra: Archeologický ústav SAV; Vrútky: Via Magna s.r.o., 153–162.

Chvojka, O., John, J., Šálková, T., 2012. Nové nálezy jantaru z doby bronzové v jižních Čechách. In: Kujovský, R., Mitáš, V. (eds), *Václav Furmánek a doba bronzová.* Zborník k sedemdesiatym narodeninám. Nitra: Archeologický ústav SAV, 129–135.

Chvojka, O. et al., 2017. Chvojka, O., Chytráček, M., Metlička, M., Michálek, J., Jantar střední až pozdní doby bronzové v Čechách. *Památky archeologické,* 108, 89–120.

Čivilytė, A., 2004. Pagaminti tam, kad panaudotum? Keletas nežinomos bronzinės liejimo formos (Dovilai, Klaipėdos raj.) reikšmių. *Lietuvos archeologija,* 25, 221–232.

Čivilytė, A., 2005. Zur Seltenheit metallener Waffen der Bronzezeit im Ostbaltikum. *Archäologisches Korrespondenzblatt,* 35/3, 329–344.

Čivilytė, A., 2009. Das Neolithikum in der Bronzezeit? Zur wirtschaftlichen Situation im Ostbaltikum. In: Bartelheim, M., Stäuble, H. (eds). *Die wirtschaftlichen Grundlagen der Bronzezeit Europas.* Rahden/ Westf.: Verlag Marie Leidorf GmbH, 105–117.

Čivilytė, A., 2012. In Search of a Theoretical Assessment of Bronze Age Society in the Baltic Countries. *Archaeologia Baltica, 18*. People at the Crossroads of Space and Time (Footmarks of Societies in Ancient Europe), II, 14–27.

Čivilytė, A., 2014. *Žmogus ir metalas priešistorėje: Žvilgančios bronzos trauka.* Vilnius: Lietuvos istorijos institutas.

Čivilytė, A., 2016a. The Significance of Amber in the Bronze Age in the Eastern Baltic Region: Some Remarks. In: Cellarosi, P. L. et al. (eds). *The Amber Roads.* The Ancient Cultural and Commercial Communication between the Peoples. Roma: Consiglio Nazionale delle Ricerche, 139–154.

Čivilytė, A., 2016b. How were amber artifacts produced and used during the Bronze Age in the east Baltic? Atti del 1° Convegno Internazionale sulla Viabilità Antica "Le Vie dell'Ambra. MILENNI. *Studi di archeologia prehistorica,* 7, 45–55.

Čivilytė, A., 2022. Peripheral or non-peripheral? The „world view" of the Bronze Age people in the eastern Baltic. In: Hofmann, D., Nikulka, F., Schumann, R., (eds). *The Baltic in the Bronze Age.* Regional patterns, interactions and boundaries. Leiden: Sidestone Press, 309–324.

Čivilytė, A., Duberow, E., Pernicka, E., 2015. His left foot: a new investigation of the oriental Bronze Age figurine from Šernai (Western Lithuania) and the question of its authenticity. *Germania,* 93, 97–120.

Čivilytė, A., Podėnas, V., Minkevičius, K., Luik, H., 2023. New Insights on Bronze Age Metallurgy in the Eastern Baltic Region: Archeometallurgical Investigations Based on EDXRF and Lead-Isotope. *Archaeology & Anthropology: Open Access,* 4, 627–638.

Dabrowski, J., 1968. *Zabytki metalowe epoki brazu miedzy dolna Wisla a Niemnem*. Wroclaw: Zakład Narodowy im. Ossolińskich.

Drzewicz, A., 2003. Dwa czekany typu Nortycken z Czubina ze zbiorów Państwowego Muzeum Archeologicznego w Warszawie. *Wiadomości Archeologiczne,* 56 (2002–2003), 63–68.

Ernée, M., 2012. Jantar v české únětické kultuře – k počátkům jantarové stezky. *Památky archeologické,* 103, 71–172.

Falkenstein, F., 2011: Zu Struktur und Deutung älterurnenfelderzeitlichen Hortfunde im

nordalpinen Raum. In: Dietz, U. L., Jockenhövel, A. (eds). *Bronzen in Spannungsfeld zwischen praktischer Nutzung und symbolischer Bedeutung.* Prähistorische Bronzefunde, XX/13. Stuttgart: Franz Steiner Verlag, 71–105.

Frána, J., Jiráň, L., Moucha, V., Sankot, P., 1997. *Artifacts of copper and copper alloys in prehistoric Bohemia from the viewpoint of analyses of element composition, II.* Památky archeologické – Supplementum, 8. Praha: Archeologický ústav AV ČR.

Gediga, B., 2007. Remarks on long-distance trade exchange in the Bronze Age and early Iron Age. In: Baron, J., Lasak, I. (eds). *Long Distance Trade in the Bronze Age and Early Iron Age.* Conference materials, Wroclaw 19. – 20. 5. 2005. Studia Archeologiczne, 40. Wroclaw: Wydawnictwo Uniwersytetu Wroclawskiego, 7–13.

Gedl, M., 2004. *Die Beile in Polen IV (Metalläxte, Eisenbeile, Hämmer, Ambosse, Meißel, Pfrieme).* Prähistorische Bronzefunde, IX/24. Stuttgart: Franz Steiner Verlag.

Gimbutas, M., 1960. A Survey of the Bronze Age Culture in the Southeastern Baltic Area. *Swiatowit,* 23, 389–433.

Hansen, S., 1994. *Studien zu den Metalldeponierungen währen der älteren Urnenfelderzeit zwischen Rhônetal und Karpatenbecken.* Universitätsforschungen zur prähistorischen Archäologie, 21. Bonn: Dr. Rudolf Habelt GmbH.

Harding, A., 2013. Trade and Exchange. In: Fokkens, H., Harding, A. (eds). *The Oxford Handbook of the European Bronze Age.* Oxford: Oxford University Press, 370–381.

Holste, F., 1953. *Die Bronzezeit in Süd- und Westdeutschland.* Berlin: De Gruyter.

Horst, F., 1987. Die Elbe – Mittler zwischen den bronzezeitlichen Stämmen Mitteleuropas. In: Plesl, E., Hrala, J. (eds). *Die Urnenfelderkulturen Mitteleuropas.* Symposium Liblice, 21. – 25. 10. 1985. Praha: Archeologický ústav ČSAV, 79–87.

Jiráň, L., 2000. Die Frage nach den Rohstoffquellen der urnenfelderzeitlichen Bronzeproduktion in Böhmen. In: Chytráček, M., Michálek, J., Schmotz, K. (eds). *Archäologische Arbeitsgemeinschaft Ostbayern/West- und Südböhmen,* 9. Treffen, 23. bis 26. Juni 1999 in Neukirchen b. Hl. Blut. Rahden/Westf.: Verlag Marie Leidorf GmbH, 61–67.

Jiráň, L. et al., 2013. *The Prehistory of Bohemia 4. The Bronze Age.* Praha: Archeologický ústav AV ČR.

Keiling, H., 1987. *Die Kulturen der mecklenburgischen Bronzezeit.* Schwerin: Museum für Ur- und Frühgeschichte.

Koschik, H., 1981. *Die Bronzezeit im südwestlichen Oberbayern.* Materialhefte zur bayerischen Vorgeschichte 50. Kallmünz/Opf.: Verlag Michael Lassleben.

Kristiansen, K., 2023. Contrasting 3rd and 2nd millennium BC mobility in temperate Europe: migration versus trade. In: Lahelma, A. et al. (eds). *Moving northward.* Professor Volker Heyd´s Festschrift as he turns 60. Oulu: Archaeological Society of Finnland, 234–249.

Kubach-Richter, I., 1990. Verbreitungsbilder bronzezeitlichen Arm- und Beinschmucks am Übergang von der Hügelgräber- zur Urnenfelderzeit – Beispiele für regional begrenztes Bronzehandwerk und weiträumige Kontakte. *Beiträge zur Geschichte und Kultur der mitteleuropäischen Bronzezeit.* Berlin: Zentralinstitut für Alte Geschichte und Archäologie der Akademie der Wissenschaften, Nitra: Archeologický ústav SAV, 229–247.

Kytlicová, O., 1959: Sekerky s rovným lištovitým schůdkem v českých nálezech bronzů. *Acta Universitatis Carolinae,* 3. Sborník prací k poctě 60. narozenin akademika Jana Filipa. Praha: Karlova Univerzita, 129–138.

Kytlicová, O., 1967. Die Beziehungen der jung- und spätbronzezeitlichen Hortfunde südwärts und nordwärts des Erzgebirges. *Arbeits- und*

Forschungsberichte zur sächsischen Bodendenkmalpflege, 16/17, 139–177.

Kytlicová, O., 1988. K sociální struktuře kultury popelnicových polí. *Památky archeologické,* 79, 342–389.

Kytlicová, O., 1991. Die Bronzegefäße in Böhmen. *Prähistorische Bronzefunde,* II/12. Stuttgart: Franz Steiner Verlag.

Kytlicová, O., 2007. Jungbronzezeitliche Hortfunde in Böhmen. *Prähistorische Bronzefunde,* XX/12. Stuttgart: Franz Steiner Verlag.

Laux, F., 2000. Die Äxte und Beile in Niedersachsen I (Flach-, Randleisten- und Absatzbeile). *Prähistorische Bronzefunde,* IX/23. Stuttgart: Franz Steiner Verlag.

Malý, K., Daňa, M., Kapusta, J., 2019. Možnosti a omezení ručních XRF analyzátorů při analýzách bronzů. *Archeologia Technica,* 30, 84–88.

Maran, J. et al., 2020. Maran, J., Bajenaru, R., Alincai, S.-C., Popescu, A.-D., Hansen, S., (eds). Objects, Ideas and Travelers. Contacts between the Balkans, the Aegean and Western Anatolia during the Bronze and Early Iron Age. *Universitätsforschungen zur Prähistorische Archäologie,* 350. Bonn: Verlag Dr. Rudolf Habelt, GmbH.

Mödlinger, M., 2010. Zur Dokumentation bronzezeitlicher Waffen und Werkzeuge aus dem ehemaligen Ostpreußen, *Acta Praehistorica et Archaeologica,* 42, 109–153.

Müller-Karpe, H., 1959. Beiträge zur Chronologie der Urnenfelderzeit nördlich und südlich der Alpen. *Römisch-Germanische Forschungen,* 22. Berlin: De Gruyter.

Nessel, B., Neumann, D., Bartelheim, M. (eds). 2018. *Bronzezeitlicher Transport. Akteure, Mittel und Wege.* Tübingen: Tübingen University Press.

Nessel, B., Uhnér, C., 2018. Spezialisierte Transporteure in der Bronzezeit? Überlegungen zu Natur und Organisation von Nah- und Ferntransporten in Europa nördlich des Balkan-Gebirges. In: Nessel, B., Neumann, D., Bartelheim, M. (eds). *Bronzezeitlicher Transport. Akteure, Mittel und Wege.* Tübingen: Tübingen University Press, 59–83.

Nørgaard, H. W., 2018. The Nordic Bronze Age (1500–1100 BC): Craft Mobility and Contact Networks in Metal Craft. *Praehistorische Zeitschrift,* 92 (2), 1–32.

Sørensen, T. F., 2012. Original copies: seriality, similarity and the simulacrum in the Early Bronze Age. *Danish Journal of Archaeology,* 1, 45–61.

Stockhammer, P. W., 2017. The dawn of the copy in the Bronze Age. In: Forberg, C., Stockhammer, P. W. (eds). *The transformative power of the copy: a transcultural and interdisciplinary approach.* Heidelberg: Heidelberg University Publishing, 169–189.

Stuchlík, S., 1988. Bronzové sekeromlaty na Moravě. *Památky archeologické,* 79, 269–328.

Tisucká, M., Ohlídalová, M., 2013. *Luxus ze vzdálených zemí. Jantar doby bronzové ze sbírky Národního muzea.* Praha: Národní muzeum.

Uckelmann, M., 2013. Land transport in the Bronze Age. In: Fokkens, H., Harding, A. (eds). *The Oxford handbook of Bronze Age Europe.* Oxford: Oxford University Press, 398–413.

Vasks, A., 2008. Weapons and warfare during the Bronze Age in the area of present-day Latvia. *Archaeologia Baltica,* 8, 32–38.

Vasks, A., 2016. Contacts and Exchange in the Bronze and Pre-Roman Iron Age in the Territory of Latvia: Amber and Bronze in Focus. In: Cellarosi, P. L. et al. (eds). *The Amber Roads. The Ancient Cultural and Commercial Communication between the Peoples.* Roma: Consiglio Nazionale delle Ricerche, 161–168.

RYTŲ BALTIJOS REGIONO IR PIETŲ BOHEMIJOS RYŠIAI BRONZOS AMŽIUJE? NORTIKĖNŲ KOVOS KIRVIS OLEŠNOS LOBYJE (PIETŲ BOHEMIJA)

ONDŘEJ CHVOJKA, JAN JOHN

Santrauka

Lobis buvo aptiktas 2012 m. žvalgant mėgėjiškai, o vėliau perduotas Pietų Bohemijos muziejui České Budejovicėje. Rastas iškyšulyje netoli Olešnos kaimo Pietų Čekijoje, tačiau radimo aplinkybės neužfiksuotos. Remiantis informacija, visi metaliniai daiktai buvo sudėti į du keraminius indus. Perduota 190 metalinių dirbinių, kurių bendras svoris siekė 13810 g, dauguma jų fragmentiški. Dirbinių tipologija leidžia manyti, kad šį lobį galima priskirti Laidojimo urnų laukų kultūros laikotarpio pradžiai, t. y. Br D–Ha A1 (apie 1300–1100 m. pr. m. e.).

Iš visų lobio metalo dirbinių išsiskiria sveikas Nortikėnų tipo kovos kirvis. Tai unikalus radinys Vidurio Europoje, t. y. dabartinėje Šiaurės Vokietijoje, Šiaurės Lenkijoje ir Rytų Baltijos šalyse. Šiuose regionuose Nortikėnų kovos kirviai dažniausiai datuojami III periodu, o tai gerai koreliuoja su Olešnos lobio datavimu.

Olešnos kovos kirvis atgabentas iš Šiaurės arba Šiaurės rytų Europos. Tačiau jo paskirtis to meto Pietų Bohemijos visuomenėje lieka ginčytina. Į Olešnos lobį pateko įvairių, daugiausia vietinės kilmės gaminių fragmentų; tik du *Friedrichsruhe* tipo bronzinius puodelius galima pavadinti didelės vertės dirbiniais. Vis dėlto platesnėje Olešnos apylinkių teritorijoje Br D–Ha A1 vietinio elito įrodymų (pvz., žymių asmenų kapų ar elitinių gyvenviečių) nėra.

CONTACT BETWEEN THE EASTERN BALTIC REGION AND BOHEMIA IN THE BRONZE AGE? NORTYCKEN TYPE BATTLE-AXE FROM THE HOARD IN OLEŠNÁ, SOUTH BOHEMIA

ONDŘEJ CHVOJKA, JAN JOHN

Summary

In 2012, a hoard was found and subsequently handed over to the South Bohemian Museum in České Budějovice during an amateur prospection. The hoard was found in a promontory near the village of Olešná in Southern Bohemia, but the circumstances in which it was found were not documented. Based on the information provided, all metal objects were placed in two ceramic vessels. 190 metal artifacts with a total weight of 13,810 g were handed over, most of which were fragmented. The typology of artifacts suggests that this hoard may be attributed to the beginning of the Urnfield period, i.e., in Br D – Ha A1 (ca 1300–1100 BC).

A complete battle-axe of the Nortycken type is a notable metal artifact in this hoard. It is a unique find in Central Europe, with the closest analogies in regions of, present-day Northern Germany, Northern Poland, and the Eastern Baltic states. In these regions, the Nortycken battle-axes are mostly dated to Period III, which correlates well with the dating of the Olešná hoard.

The Olešná battle-axe is an imported artifact from Northern or Northeastern Europe. However, its role in Southern Bohemian society at that time remains debatable. Fragments of various, mostly local products were deposited in the Olešná hoard; only two bronze cups of the Friedrichsruhe type in the hoard can be described as high-value artifacts. However, in the wider area around Olešná there is no evidence of local elite (e.g., graves of prominent individuals or elite settlements) in Br D – Ha A1.