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Obříství, a Late Bronze Age Port of Trade in Central Bohemia

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ABSTRACT
The paper discusses the Late Bronze Age in the site of Obříství, located in a strategic area defined by the confluence of Bohemia's two major rivers – the Elbe and the Vltava. Based on the extensive rescue excavations which have been recently conducted; on the analysis of the Knovíz culture settlement development in the studied microregion; and on specific finds including fragments of raw amber, this site is considered as a probable major centre of trade and of long distance contacts during the Late Bronze Age.

KEYWORDS
Late Bronze Age; Central Bohemia; Knovíz culture; trade and long distance contacts; amber.

INTRODUCTION

Our area of interest is situated in Central Bohemia, 25 km north of Prague, close to the town of Mělník, at the confluence of the Czech Republic's two largest rivers, the Elbe and the Vltava. The dominant feature of this region, which lies in the Elbe lowlands in the area of the Elbe/Vltava divide, is its flat terrain in which the altitude does not exceed 200msl. It is an area that has both a favourable climate and an optimal amount of rainfall. The area is characterised pedologically by the presence of a black earth soil-type of the highest quality, while in the immediate vicinity of the Elbe River, and specifically at the confluence of the two rivers, there are alluvial soils, and the bedrock mainly consists of Quaternary materials that were formed by the sedimentation that occurred in the Elbe and Vltava catchment area – i.e. in the form of river terraces, loess and sand drifts (Demek 1987, 348, 482; Neuhäuslová *et al*. 2004, 24; Tomášek 2007).

As is evident from the above overview, this is a very convenient location for a settlement and the Mělník area is one of the most intensely populated regions of the Czech prehistory (Sklenář 1966). This text will focus mainly on the character and the development of the settlement in the timespan between the Late and the Final Bronze Age (Br D–Ha B3 according to Reinecke 1965), within the cadastral area of the municipality of Obříství and its immediate surroundings (see Fig. 6; Pl. 3/1).

In this period it is possible to identify three major cultural complexes in Bohemia: in central, south and north-western Bohemia there is the Knovíz culture with the Final Bronze Age Štítary phase; while the Lusatian culture with its Final Bronze Age Silesian–Platenice culture phase occupies north and east of Bohemia; and the Knovíz-Milavče culture is characteristic of western Bohemia during the Late Bronze Age followed by the Nynice culture during the Final Bronze Age (Jiráň ed. 2008, 129). It is in the Mělník region that the contact between the two major cultural complexes takes place. In Ha A1, the Knovíz culture probably infiltrated in the north-western part of this settlement area to the then uninhabited right bank of the Elbe River, while items of the Lusatian culture can be found – on the contrary – on the left bank of the

Elbe River in its south-eastern part (Jiráň 1991, 116; Sklenář 1966, Tab. X, 298–303, Tab. XXX: 1130). In the following Ha A2–Ha B1 period the bearers of the Knovíz culture penetrated the Lusatian area as far east as to the Čáslav area and the Elbe River in Mělník area ceased to represent a natural border between the two cultures (Jiráň 1991, 103; Jiráň ed. 2008, 131, Fig. 77). The manner in which this mutual confrontation actually took place remains unclear. However, as can be seen, for example, in the common settlement area located in Tišice (cf. Fig. 6 for the sites referred to in the text), it seems to have been an ongoing continuous peaceful transition rather than a violent intervention to the Lusatian settlement in the newly occupied territories (Jiráň 1991, 110–111). During several centuries a demarcation line was also maintained, including a kind of "no man's land", that existed between the Knovíz and the Lusatian cultures, which suggests that there was a clear definition of and a respect for the individual territorial integrity of each of the two cultures that were essentially related (Bouzek 2006, 52).

AN OVERVIEW OF KNOWLEDGE REGARDING THE OBŘÍSTVÍ MICROREGION

EARLIER FINDS

The main settlement areas of the Knovíz culture in the area of interest were the drainage basins of both of the major rivers and of their tributaries. The link between intensive settlement and access to water resources is quite a significant settlement factor and the only largely unpopulated location was the impassable and swampy area in the Elbe-Vltava alluvium (Jiráň 1991, 115). The vast majority of the earlier finds are dated, only generally, to the period of the Knovíz culture (for a complete overview of the finds see Tab. 1 and Pl. 3/1). The evidence of the earliest Tumulus/Knovíz cultures Transitional horizon (Br C2/Br D) is insignificant in the area of study, while at the confluence of two rivers it is represented only by finds in Chlumín and by the cremation grave in Zálezlice. Though in the larger context of the Mělník region, evidence of the Transitional Knovíz horizon (Br D) is somewhat more common, in the Obříství microregion pottery fragments dated to this period have, so far, only been sporadically documented in Dušníky (Jiráň 1991, 93; Sklenář 1985, Tab. LXXII: 5–6, LXX: 17, LXVIII: 29). As far as the Early Middle Period of the Knovíz culture is concerned (Ha A1) there are virtually no references to any earlier finds in Obříství and its surroundings; only towards the time of its closure are there some traces of settlement activities at the Na Štěpáně site (Koutecký – Spurný 1999). Likewise, the previous excavations carried out in the cadastral area of the village brought almost no evidence of the rapid increase of population during the subsequent Late Middle Period (Ha A2) with the exception of the settlement in Tišice (Jiráň 1991, 96) and the hoard in Jenišovice (Kytlicová 2007, Tab. 98, B – 105, A), both on the opposite river bank. The Štítary stage of the Knovíz culture (Ha B1–Ha B3) was also spotted only in settlement traces located mainly on the western edge of the village (Šmahelová 2009).

RECENT INVESTIGATIONS

In recent years, however, several large-scale excavations have been carried out in the studied region during which mainly the Late and the Final Bronze Age activities have been detected; other finds were also obtained during the supervision of smaller-scale construction projects. This newly discovered information alters our previous knowledge on the character of the Knovíz culture settlement and points to significantly more pronounced activities of the bearers of this culture in the area.

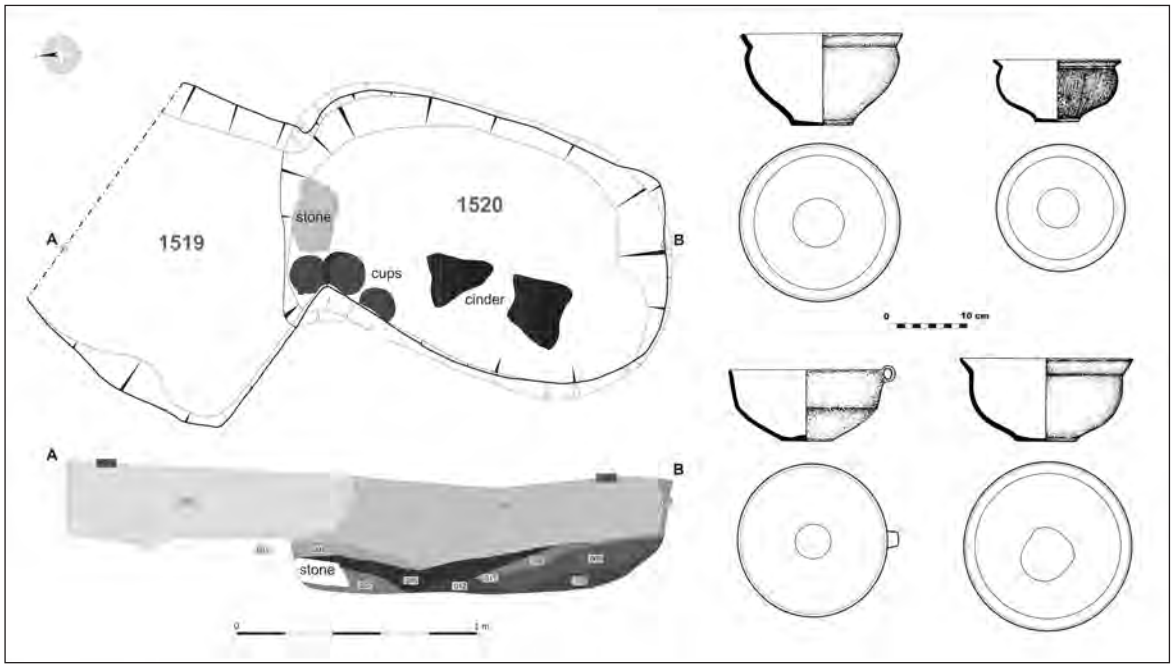

Fig. 1: During the IDEASTAV excavation was discovered a kiln with a stoking area (features Nos. 1519 and 1520), in which four partially nested cups, very charred blocks of wood and a stone slab handler have been preserved.

The impetus for the first large-scale excavation that was conducted between the years 2008 and 2011, was the IDEASTAV development project for the construction of 64 residential buildings and of their access roads in the area between the municipality of Obříství and the localities of Dušníky and Semilkovice which had been, until then, utilised only for agricultural purposes (Čuláková – Fleková – Šmahelová 2014). The archaeological situations that were encountered comprised sunken features and the remains of a cultural layer up to 100 cm thick. The settlement traces concentrated mainly in the north-western part of the area, while towards the south-east their incidence waned so that at the edges of this area they were almost completely absent. A total of 1475 features were documented on this site; the archaeological components encountered included a Neolithic settlement; Early Bronze Age burial activities; an intrusion from the Middle Bronze Age; the Late Bronze Age settlement features; the Hallstatt and the Roman eras; and also the Early Middle Ages (Popelka – Šmidtová eds. 2014). Due to the high number of intrusions, however, the vast majority of these features was generally only dated as belonging to prehistory or were even assessed as undateable (Čuláková – Fleková – Šmahelová 2014, 14). Even under these conditions, the most widely represented settlements were those of the Late Bronze Age, i.e. the Štítary phase of the Knovíz culture (Ha B1–Ha B3) with a total number of 156 features found (Fig. 1 and 2 left). While other settlement horizons were published in a separate monograph (Popelka – Šmidtová eds. 2014), an evaluation of the features pertaining to the Štítary phase will be provided in a planned separate volume. For the purposes of this paper we will only mention the discovery of the layouts of two longhouses that were unearthed in the northern part of the area in question (Features Nos. 420 and 1482).

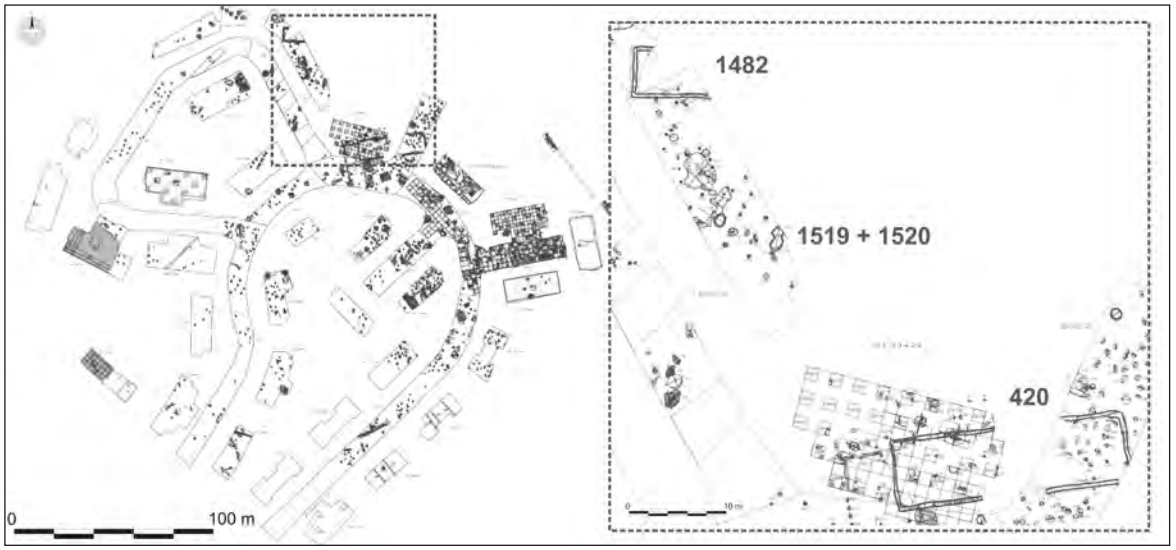

Fig. 2: On the left: the overall plan of the IDEASTAV excavation. On the right: a detail of the plan showing the groundplans of two Knovíz-culture longhouses.

In the northern part of the area, the groundplans of one partial and one complete longhouse were found (see Fig. 2). In both cases they had an elongated rectangular shape with rounded corners that were defined by a continuous perimeter trough. The width of the groundplans was within the range of ca. 6 m, while the length of the entirely preserved house was ca. 25 m and the depth of the preserved trough typically ranged between 0.2 and 0.6 m. A larger number of postholes occurred in the area of the floor plan, both inside and outside of the trough. Their pertinence to the structure is, however, debatable due to the lack of datable material. Based on parallel with similar groundplans of buildings defined by a peripheral groove (e.g. Opatovice nad Labem, Turnov – Maškovy zahrady, Dahlen in Saxony) these houses are considered as belonging to the Late Bronze Age[1] (for more on this topic see Sklenářová 2010).

Another development project was initiated in 2011 on the opposite, i.e. the eastern, side of the municipality of Obříství, where the investor planned to build service roads and provide utilities and a noise barrier for an entire new colony of family houses (summarised in Pecinovská 2014). Rescue excavation encountered 904 features and also a ca. 100 cm thick cultural layer, which was excavated using a square grid. The intensity of human presence in this area throughout the prehistory has been confirmed: the documented components include a Neolithic settlement horizon; the graves of the Corded Ware culture; settlement features from throughout the entire Bronze Age Period and also from the Hallstatt and the Roman eras. The most significant from amongst the dated features were those dated to the Knovíz culture to which nearly 200 features were attributed. Their processing is still in progress, but it appears that the settlement chronology here spans from the early Middle Period to the Late Period (Ha A1–Ha B3). Numerous settlement pits were documented, only the bottoms of which had survived and therefore they were relatively shallow; their rather common superposition attest to both the intensity and the continuity of settlement activities. No human remains were found in the pits. Lumps of raw amber were unearthed directly in the field in two features located in the north-eastern part of the excavated area and dated by the accompanying potte-

1 Similar long houses are, however, known in the Early Bronze Age Únětice culture as well.

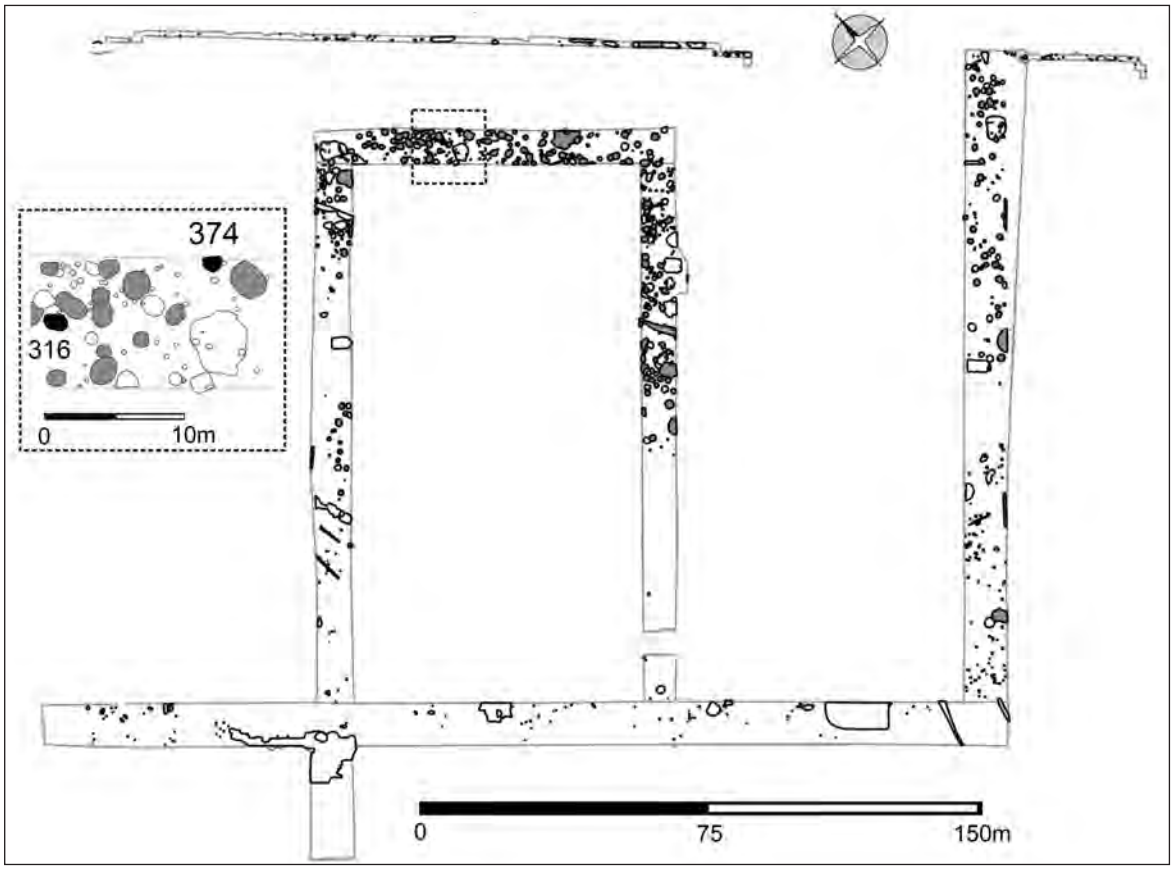

Fig. 3: The overall plan of the excavation in the eastern part of Obříství showing two pits (features Nos. 316 and 374) with finds of amber.

ry finds to Ha A1 (Fig. 3; Pl. 3/2).[2] In the case of Feature No. 374, there is a very tiny fragment that, moreover, comes from the upper layers of the feature's fill and therefore we may most likely consider it redeposited. Feature No. 316 is more reliable in this respect because more fragments of raw amber were found that came from the layer just above its base (see Fig. 4). To determine their provenance the amber fragments were analysed by infrared spectroscopy and the resulting spectrum shows the characteristic values typical of the Baltic region and thereby, in both cases, their Baltic origin was confirmed (Fig. 8; Novotná 2015).

In the summer of 2012, two Ha A1–Ha A2 cremation graves of the Knovíz culture were encountered during dredging of trenches for utility lines (summarised by Brejcha 2013). This excavation took place to the southwest, adjacent to the large-scale excavations referred to above and the burials were located at a distance of ca. 300 m from the excavated settlement. The first of the graves contained a total of 12 pottery vessels; the actual burial was placed in

2 Feature No. 316 – a pit of an irregular oval groundplan measuring 176 × 120 cm and with a max. depth of 48 cm – that contained fragments of pottery, animal bones, daub and river shells. In the bottom layer a few lumps of amber were encountered (the largest one 21.3 × 14.37 × 9.04 mm).
Feature No. 374 – a pit of a circular groundplan with a diameter of 140 cm and with a max. depth of 96 cm, that disturbs another feature of uncertain age (Feature No. 414 with no finds); it has been disturbed by a more recent posthole (Feature No. 413) and contains fragments of pottery, animal bones and river shells. The amber lump (dimensions 7.52 × 4.92 × 4.35 mm) was encountered on its very top, laying on the surface of the topmost 0–20 cm layer.

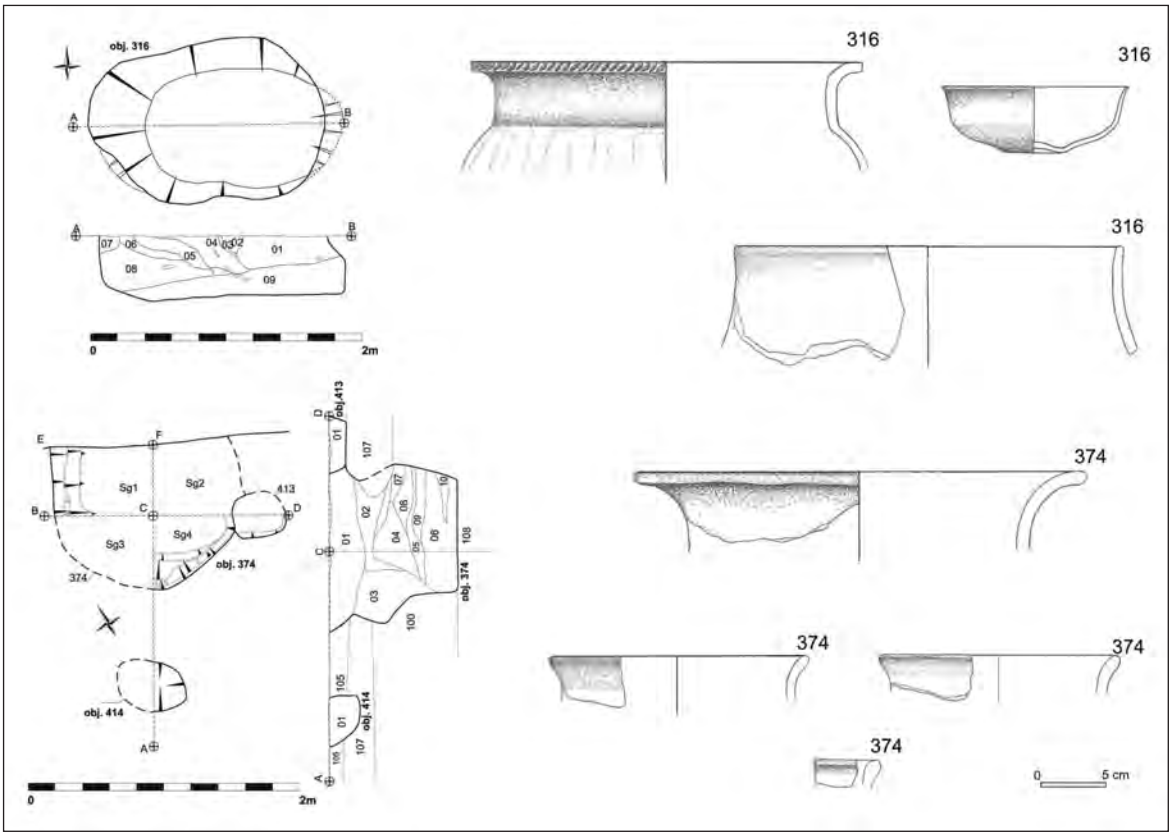

Fig. 4: Plans and selections of finds from the pits – features Nos. 316 and 374.

the central amphora whose fill contained also a bronze pin with a flattened spherical head and a small fraction of twisted wire. The second grave, the base of which was lined with several flat stones, contained seven vessels and the function of the urn was fulfilled by an amphora into which a bronze pin with a double-conic head had been placed. In addition to the already mentioned inventory, the first grave also contained a claw of a large carnivore, a brown bear (*Ursus arctos*, preliminary determination by R. Kyselý). The find of bear trophies among grave goods is a rare phenomenon of the Bohemian Bronze Age, whereby the only published find is that of a burnt bear canine from the cremation grave in the barrow No. 6 of the Knovíz culture burial mounds in Levousy (Peška 1975, 628).[3] We encounter this custom more frequently in later Germanic cremation graves (Kyselý 2005; Schönfelder 1994).

The most recent large-scale excavation was carried out in 2012–2013 during the construction of the levees in Zálezlice. A part of an open agricultural settlement from the late Middle period of the Knovíz culture has been documented (Ha A2–Ha B1; summarised by Unger 2015). In total, 123 sunken features were unearthed, the vast majority of which were silos or secondary refuse pits that were, in some instances, located in mutual superposition. As is typical of the Knovíz culture, human burials also took place in the settlement area. In some of the investigated pits as many as nine skeletal burials were unearthed, while in others only parts of bodies were found. In three instances, the bodies were obviously not in a ritual position (cf. Fig. 7): At the

3 Throughout prehistory and also during the early modern age the bear was considered a sacred and revered animal in all the different cultures; its attributes are also put into the context with shamanism (Pastoureau 2011).

bottom of the Feature No. 31, an incomplete skeleton was lying on their left side, while in the Feature No. 69 the remains of two individuals were lying together. In the upper part of the Feature No. 28, there was a human skeleton of an individual under seven years of age placed on her/his left side, with arms and legs tight against the body, as if she/he had been dumped into the pit either tied-up or in a closed bag. A group of five burials (Fig. 5) deviate from the known cases of inhumations in the Knovíz culture milieu in that the bodies are lain extended (either in east-west or north-south direction); that they are present as complete skeletons; that there are no signs of violence on the bones; and mainly, that the burials contained gravegoods, which comprise miniature vessels placed close to the head or directly beneath it, as was the case also with bronze artefacts in two instances.[4] In the Bohemian Late and Final Bronze Age we know of several similar burials in settlement pits[5] and it is impossible not to mention in this context also a very similar Knovíz culture grave with burial in a stone cist from Holubice

4 Feature No. 5 – a pit of a circular layout, a diameter of 1.8 m and a max. depth of 55 cm. The skeleton is extended on his/her back with his/her arms held along the body and is lying in a north-south direction; accompanied on the right side by a bovine spine and an undecorated bowl without any handles; a child, infans III (11–13 years of age).
Feature No. 12 – a pit with an irregular oval layout and dimensions of 1.5 × 1.4 m and a max. depth of 25 cm; only the very bottom of the pit was preserved. The skeleton is extended on her back and lying in an east-west direction, with her arms alongside her body; a miniature urn was deposited under her head on the right side while beneath the head there was a cast bronze flat ring of a lenticular section; a woman, maturus II-senilis (over 50 years of age).
Feature No. 19 – a pit of an unknown diameter, perhaps with a circular layout; only the very bottom of the pit was actually encountered. The position of the skeleton – an immature individual, infans III-juvenis (12–14 years of age) – was unclear since the burial had been damaged during the construction works. Beneath the preserved legs that were outstretched in the east-west direction, a skeleton of a dog and a part of a sheep spine were deposited.
Feature No. 28 – a pit of a circular layout and a 1.7 m diameter, with concave walls and a max. depth of 0.7 m (SJ 28/532), which intersected a shallower pit (SJ 28/531). Burial 1 – at a depth of 0.4 m a skeleton on his/her left side in a significantly crouched position; a child, infans II (2.5 to 3.5 years of age). Burial 2 – at the bottom of the pit a skeleton extended on his back with his arms along the body, lying in the north-south direction, a miniature conical bowl without handles was placed under his head; most likely a man, maturus II – senilis (over 50 years of age).
Feature No. 122 – a pit of a circular layout and a diameter of 1.8 m, with concave walls and a max. depth of 0.7 m. The skeleton is lying extended on her back with her hands resting in her lap and lying in a north-south direction on a thick layer of collapsed daub; equipped with two cups with handles by her left humerus, while above her head there was an S-shaped bowl and at her temporal bone she had a bronze lock ring coiled from double-wire and beneath the head a flat cast bronze ring with a lenticular section; a woman, adultus II – maturus I (35–50 years of age).

5 We can refer, for example, to a grave in Bořeň that contained a boar tusk and a part of a cup with an inserted fragment of bronze sheet; to Chudoměřice near Bílina where the burial was equipped with a miniature container; to Lenešice near Louny with a graphiton coated cup; and to Žiželice near Žatec where a small cup was found, while some skeletons buried in Prague–Hloubětín also had a larger number of grave goods (Bouzek – Koutecký 1980, 406). A skeleton burial in a pit with a Knovíz tray vessel is known from Pojizeří, while other containers were found at the Mužský – Hrada site (however the skull is clearly dislocated there – Štiková 1981, 112–113). The male skeleton with bronze bracelets and two cups deposited by the head that date the burial to the Knovíz culture is known from the Hloubětín 1 site (Bouzek – Koutecký 1980, 409). V. Spurný, in his analysis of the skeleton burials of the Knovíz culture (Spurný 1948, 15) states that the skeletons deposited in the extended position with varying orientation and mostly with their arms along the body constitute ca. 25% of the 150 analysed graves. According to his observations the grave goods were included with the skeleton and most of these comprised only one or two containers (a cup, a bowl, a colander or a rough cup with two handles), while the sparsely found

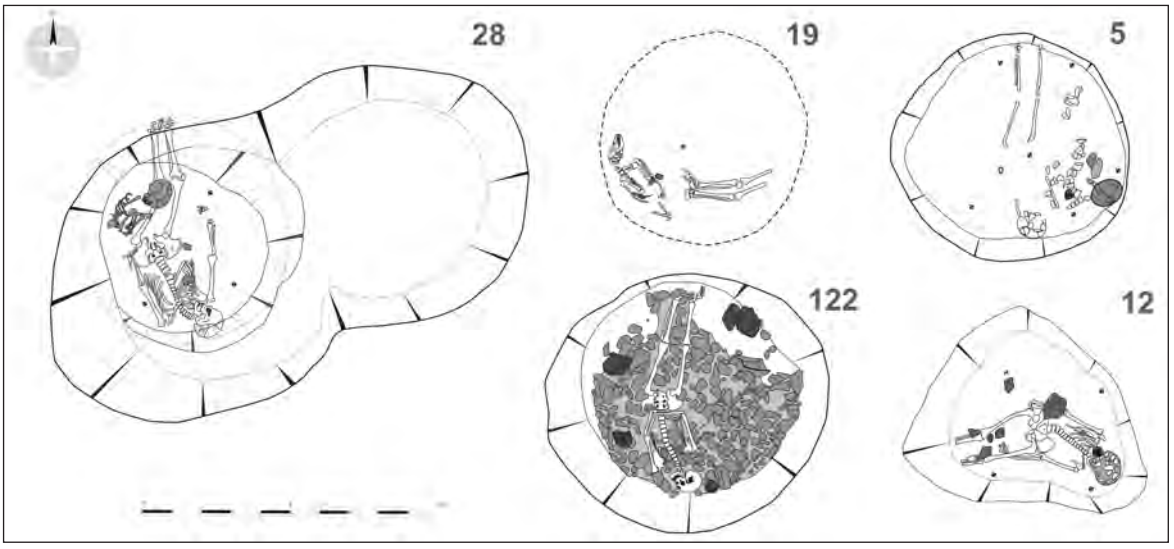

Fig. 5: Inhumation burials in ritual deposition in the settlement pits in Zálezlice.

dating back to Ha A1/A2. In this grave the skeleton was stretched-out in the east-west direction, with the arms along the body. A miniature vessel was placed to the left side of the skull with a bronze pin nearby and a knife was laid beneath the head (Bouzek 1981, 124; Schmidt 1893). There are many other instances of similar treatment of the bodies of the dead that come primarily from Austria and from Germany.[6]

AN EVALUATION OF THE SETTLEMENT AREA

The map in Pl. 3/1 makes it clear that during the Late Bronze Age the left bank of the Elbe River was almost completely inhabited, particularly in the cadastral areas of the municipalities of Obříství and Libiš that collectively occupy an area of over 2.5 km^2. For the earliest Transitional horizon of the Knovíz culture, evidence is somewhat sporadic and comes from outside the area of our interest. During the Early and the Late Middle Period, however, we can perceive a gradual shift closer to the river, which was completed during the subsequent peak-period, when we can find settlement remains also on the opposite bank of Elbe as well as in the actual alluvial plain. During the Late Period the settlement probably expanded even further and stretched continuously for a distance of two kilometres along the elevated river terrace from the localities of Semilkovice and the Dušníky to those of Na Štěpáně and Libiš. The Knovíz culture burial grounds are located in the hinterland, away from the watercourses but they are encountered within a distance of several hundred metres from where the settlements were at that time. The settlements within the studied microregion have produced plentiful docu-

bronze items generally included simple bronze rings, a bracelet and/or a pin, while in Kolín four weights were found around the skull (Spurný 1948, 16).

6 Lower Austria, Burgenland, Salzburg and the North Tyrol (Bouzek 1981, 124), the Unstrut group based in Thuringia and there were similar cases in the Francony-Palatinate, in Swabia and then also the Lower-Mainland Urnfield groups (Smejtek 2011, 267). Specifically, for example, the grave from the Bronze Age in Biblis (Starkenburg), the skeleton extended in the west-east direction with a vessel near his/her head and the skeleton burials with the grave goods deposited in a stone cists from Köchen can be mentioned (Brunn 1954; Hennig 1970; Herrman 1966).

mentation related to the textile production (clay weights and whorls), basic food processing (querns and pestles), pottery production (see Fig. 1), and metallurgical activities (including numerous finds of slag from the new excavations, together with both pyrotechnological structures and tools).[7] North of the microregion of interest, on the left bank of the Elbe River, it is possible to trace other adjacent settlement areas that are always spaced ca. two or three kilometres apart.[8] These are attested by the excavations carried-out and the discoveries made in Hořín/Brozánky (Br D–Ha B: Sklenář 1982), Dolní Beřkovice (Br D–Ha B: Sklenář 1982) and Horní Počaply (Br D and Ha B: Malyková – Pecinovská 2010).

THE POSITION OF OBŘÍSTVÍ ON TRADE ROUTES

RIVER TRAFFIC AND TRADE

Above all, its very position at the confluence of the two largest Czech rivers indicates the significance of the Late Bronze Age settlement of Obříství as a crossroads of the long-distance routes (Fig. 6; Pl. 3/1). This position in regard to both the land and river transport could also be indirectly confirmed by local finds of bronze swords in the Elbe River (Fredengren 2011, 124). A bronze flange-hilted sword dated to the Late Bronze Age (Ha B) was discovered during dredging of the riverbed on the eastern bank, ca. 100 m above the mouth of the Košátecký Creek (Zápotocký 1969, 304). Another bronze flange-hilted sword was dredged in the middle of the river near Obříství, ca. 500 m below the weir in the location where the original river arm joins today's river in the direction from Dušníky; also this sword is dated to the Late Bronze Age (Ha B; Zápotocký 1969, 304). Some time prior to 1879, two Late Bronze Age full-hilted bronze swords of the Liptov type were picked out of the Elbe River near Mělník (Ha A–Ha B1; Zápotocký 1969, 304–305). According to the inventory of river finds, there was an obvious peak of the depositing of bronze items in the Elbe River in the Late Bronze Age.[9] Their concentration in the stretch of the river passing through the microregion of interest is remarkable, because over the entire distance between Litoměřice and Děčín other such finds are scarcely known. Well-known, however, is the hoard of bronze items beneath Křížový Hill, near Libochovany where the Elbe River flows into the Porta Bohemica gorge. The hoard comprised a total of 90 items, 22 of which were swords (eleven flange-hilted – Ha A; three full-hilted of the Liptov type – Ha A2; two Tachlovice type swords – Ha B1 and six indeterminable blades; Zápotocký 1969). Many of these items from Ha A1–Ha B1, predominantly from Ha A2, were manufactured in the Carpathian Basin or in northern Germany (Jiráň ed. 2008, 243). Hoards of this type are generally interpreted as either a collective sacrifice of spoils of war and their deposition at sacred places, which is supported by reports of ancient authors and is also documented in regard to the Celts (Filip 1959, 141), or as proofs of a shipwreck or of an unintentional loss of cargo in the course of river transport. Generally, however, depositing

7 It is likely that during the excavations in Zálezlice a stone ore crusher was found. It is an oval quartz roller, 10 cm in diameter, with a depression at its centre and with grey-reddish discolouration on its surface caused by contact with fire. For this type of equipment which can be found in large quantities in the mining and metallurgical centres that are dedicated to European prehistory, their prior use in the processing of ore was confirmed by an analysis of the working traces that were found to contain preserved copper oxides (Hamon *et al*. 2009; Webb 2015, 27, 31).

8 For microregion settlement strategy of the Late and the Final Bronze Age see Smrž 1986.

9 In regard to the issue of the depositing of bronze items in an aquatic environment during the Urnfield Period see for example Hansen 1991.

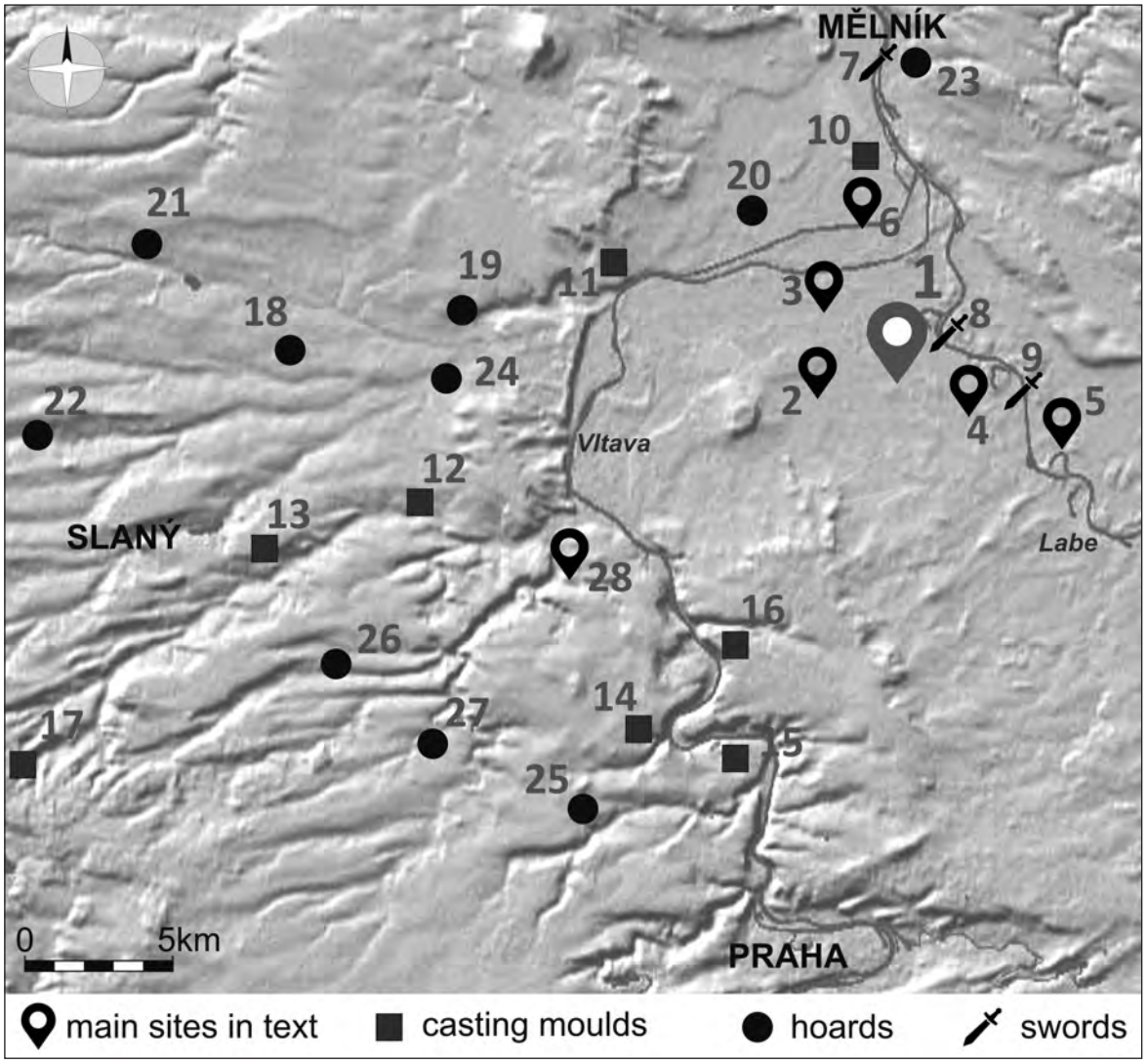

Fig. 6: An overview of the main sites presented in the text: 1: Obříství; 2: Chlumín; 3: Zálezlice; 4: Libiš; 5: Tišice; 6: Hořín; 7–9: Finds of swords in the Elbe River; 10: Brozánky; 11: Vepřek; 12: Zvoleněves; 13: Knovíz; 14: Úholičky; 15: Suchdol; 16: Přemyšlení; 17: Tuchlovice; 18: Hospozín; 19: Budihostice; 20: Jenišovice; 21: Jarpice; 22: Královice; 23: Mělník; 24: Velvary; 25: Statenice; 26: Stehelčeves; 27: Středokluky; 28: Minice.

complete items in the aquatic environment is connected with the offering to water deities (Šteffl 2014, 89). There are certain regularities in the occurrence and the composition of the river finds in Central Europe: a high percentage of them stem from the Late Bronze Age; they mostly comprise undamaged items that mostly sank in such geographically prominent places as fords and confluences or in dangerous stretches of rivers (Torbrügge 1966, 38, 46; Hansen 1991, 169). A ford across the Elbe River in Obříství has been mentioned by some scholars (Jančo 2000) in the location of today's bridge, in places where the Štěpánův ferry is also reported in the 15th century.[10]

10 Taking into account that bronze items were deposited in the river for ritual purposes, a possible analogy – geographically very distant, but chronologically contemporary with our topic – is not without interest, i.e. Chinese written sources. If we remember the significance of the Elbe River as representing the boundary

The Urnfield Cultures Europe was apparently interlinked by a net of versatile contacts running along specific communication routes. The Vltava and the Elbe Rivers can be regarded as potentially the most important communication arteries in Bohemia. Vltava forms the north-south axis connecting Bohemia with the Alpine regions as is evidenced by the origin of the copper used in Bohemia (Fránа *et al*. 1997), while the composition of the hoards that line the Vltava River indicates a connection with the southeast Middle-Danube Urnfield circuit (Jiráň 2000; 2002; Beneš – Kytlicová 1991, 78). The main haul into Central and Eastern Germany was conveyed by the overland trail via Prague – Slaný – Louny – Chomutov but also via the Elbe River route (Jiráň ed. 2008, 242; Salač 1997). For the Late and Final Bronze Age period, we can probably – according to various analogies – suppose a broad range of traded commodities including in particular grain, metals, salt, amber, oil, honey, livestock, textiles, wool, leather, fur and luxury items.[11] Salt is assumed to have been imported to Bohemia from the Saale region of Germany in the Late Hallstatt and the La Tène periods (Simon 1979; Waldhauser 1990) and there is no doubt that salt could also have constituted a significant trading item during the previous Urnfield period. The advantages of river transportation include the possibility of transporting larger quantities of material, lesser need for transport animals nor of human escorts and, in comparison with transportation using carts, no need for roads maintenance (Salač 1997, 472).[12] Written sources suggest that in the Roman provinces fluvial traffic was ten times cheaper and several times faster than overland transport (Kunow 1983, 51–55; Bouzek 1996, 221–224; Bouzek 2010, 95). It is difficult to prove trading of some of the suggested commodities such as textiles,[13] wool[14] or fur[15] which are basically invisible in the archaeological records, and similarly it is also often archaeologically impossible to provide specialised exchanges of such alimentary commodities as salt, grain, oil and honey. Trading of wine, which undoubtedly represents an excellent candidate for one of the most important

between the cultural units of the Lusatian and the Knovíz circuits, one aspect of the river cult in ancient China was the solid bond that existed between the regional political entities and the territory in which they were located. The rivers were under the control of the State and Princes also offered sacrifices to the river(s) that flowed through or that were located in their domains. During war campaigns and diplomatic missions, however, it was also permitted to offer sacrifices to rivers, even those on foreign territory that the army or the envoys crossed, which was intended to summon the help of the deities, to express gratitude for a victory achieved or simply for sanctioning oaths (Maršálek 2005, 110–113).

11 The nature of the proposed trading articles can be suggested on the basis of the oldest surviving Czech Customs Register, preserved in the Charter of the Litoměřice Chapter dated to 1097. All the values of the ongoing trade with Saxony along the Elbe River are converted there to a specific quantity of salt and it can also be concluded that Bohemia exported slaves, pottery, livestock, honey and especially grain, while fur, cloth, yarn and wool were traded in both directions (Tomas 1971; Salač 1997, 470).

12 It is, however, also necessary to take into account the number of river sections that are not navigable; for example the St. John/Štěchovice Rapids on the Vltava River, the section on the Elbe River between Chvaletice and Přelouč, etc.

13 In the Bronze Age, the textile production is primarily characterised as domestic and it is only the high occurrence of artefacts related to textile production in the Hallstatt settlements that is interpreted as a proof of our specialised production. It necessarily implies a higher quality of workmanship which was subsequently developed fully during the La Tène period (Belanová-Štolcová – Grömer 2010).

14 Wool fulling is fairly well documented in the Bronze Age but much less so for the Hallstatt period, when this technique may have already been on the wane (Barber 1992, 215–219).

15 It is also not possible to prove the production of fur, of which there are no preserved traces in the settlements (Binford 1980). In the Bronze Age contexts, it is not even confirmed by finds of animal bones from the settlements, since occurrence of "furry" animal species such as fox, bear, wolf, lynx, badger, otter, beaver and others is only exceptional (Kyselý 2005, 87).

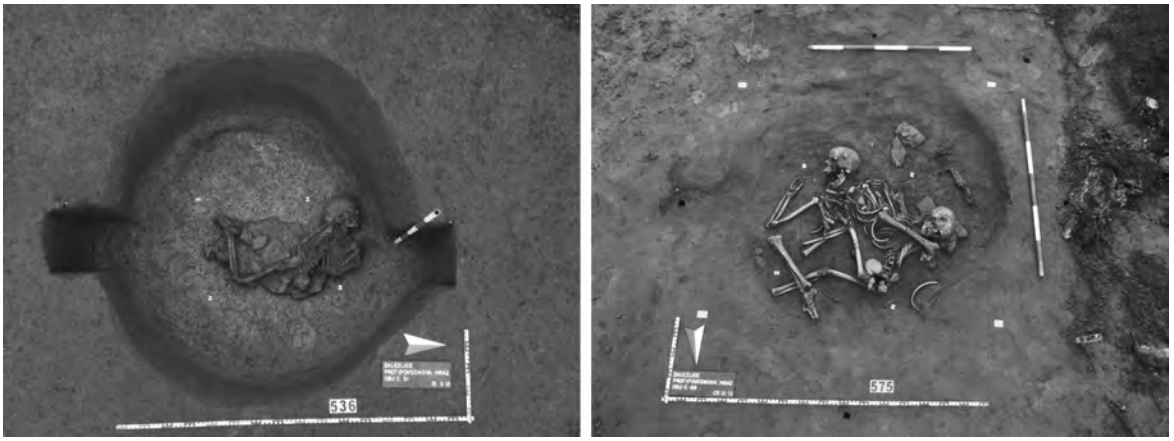

Fig. 7: Inhumation burials in the settlement pits in Zálezlice in non-ritual deposition.

articles of trade between North and Central Europe and the Mediterranean area, was recently confirmed in Kostraede in Denmark (McGovern *et al.* 2013).[16]

Given the very nature of the Late Bronze Age, when we witness a rapid increase in significance of militaria and of the warrior ethos of European societies, it is impossible not to mention human trafficking (Harding 1987, 307). Slaves could constitute a significant business commodity, especially in long-distance exchanges between the more peripheral and the more advanced societies (Patterson 1982, 148). There is no direct evidence of this possibility for the Bronze Age period that we are examining, though human trafficking between continental Europe and the Mediterranean is hypothesized for the Hallstatt period.[17] During the Urnfield culture period, on the other hand, we observe a very widespread and – from this perspective – striking phenomenon, of the irreverent depositing of human remains in pits, which is especially frequent in the Knovíz culture (Fig. 7). Although the standard burial rite of the majority population of this culture was strictly cremation, human remains are found at settlements that appear as if they were simply thrown into the pits. Quite often there are traces of violent acts or only individual parts of the skeleton are found. Due to the fact that slavery is defined as a status whereby one person is wholly owned by another person, the typical features of

16 Interesting results were provided by archaeobotanical and chemical biomolecular analyses of a bronze colander from Kostraede in Denmark, dated to 1100–500 BC, which confirmed the presence of tartaric acid originating from the Eurasian grape, honey (probably in the form of mead, which is easier to filter than viscous honey), juniper berries, Mediterranean myrtle and both birch and pine resins (McGovern *et al.* 2013). The addition of pine resin to a drink from Kostraede is not random, because it has been widely used as filler and for its healing effects. Most important in this instance, however, were its antioxidant and its preservative properties: in the Near East the resin of pine and of other conifers has been added to wine since the Neolithic Age in order to prevent its transmutation into vinegar. The wine, which had to survive a long distance journey from southern Europe to Scandinavia, was probably preserved by the pine resin (McGovern *et al.* 2013, 13–15). The bronze colander from Kostraede is of Central European origin (Hungary, see Thrane 1975) and bronze drinking sets could already have represented a significant trading commodity during the Late Bronze Age, as is suggested by the burial equipment used by the Urnfield culture from ca. 1200 BC, and this trend is indirectly confirmed by the introduction of Greek and Roman drinking sets across the European continent during later periods.

17 Briggs 2003, 248–249. Human trafficking is featured at La Tène societies as a part of the exchange with the Mediterranean (Nash 1978, 1985) and also between the Germanic tribes and Rome, where the potential market operated on a chain basis between the individual players until after the final sale to the Romans on the Rhine (Thompson 1960, 21).

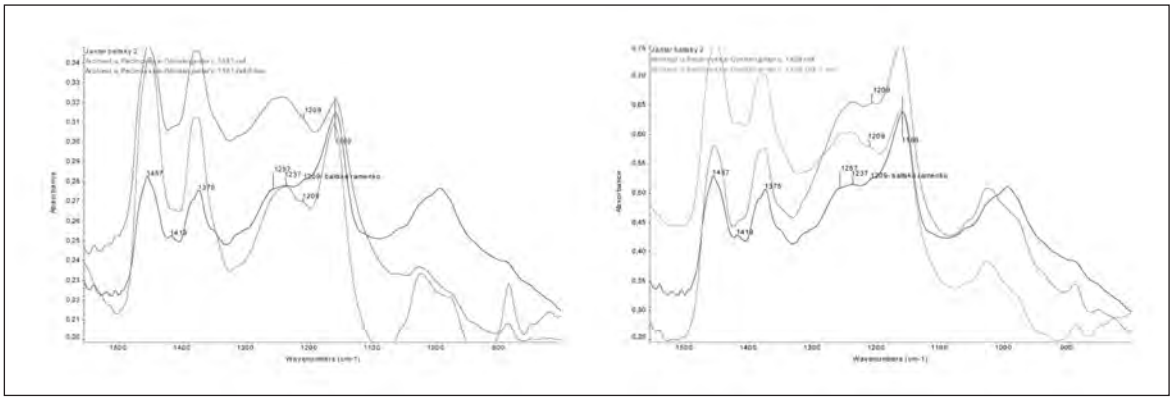

Fig. 8: Infrared spectroscopy of amber fragments from Obříství.

this phenomenon include the slave being regarded as a "socially dead person" (Patterson 1982). The slave is therefore in a "sort of liminal status outside the social structure," and, in the eyes of free people she/he is always considered as being a person without honour, dignity or respect (Květina – Hrnčíř in print). For this reason, slaves were denied even a proper manner of burial and therefore the question arises as to whether non-reverent burials in the settlement pits of Knovíz culture would identify this group.[18]

THE AMBER ROUTE

Compared with the previous period of the Middle Bronze Age, a marked decrease in the incidence of amber has been observed in the Czech Urnfield cultures (Ernée 2012, 25). This fact was explained among others by the adoption of cremation burial rite, though the incorrectness of this assumption has been pointed out (Hrala – Plesl 1989, 215; Plesl 1993, 164). Until recently, the only certain Knovíz culture amber finds were a bead and a spacer in the Ha A2/B1 horizon bronze hoard from Jenišovice, ca. 7 km from Obříství as the crow flies (Píč 1987, 700, Tab. LXXXII; Pleiner 1978, 576; Kytlicová 2007, 267–268). Of great importance are the recent amber finds from the Late Bronze Age sites in southern Bohemia, which were acquired mainly thanks to the consistent wet seiving of infills of the excavated features. Fragments of two amber beads were found during excavation of the cremation graves in Březnice, dating from the early Late Bronze Age (Br D), that were disturbed by ploughing. Other fragments from the peak period of the Late Bronze Age (Ha A2) were encountered in a lowland settlement in Hvožďany, while from the Final Bronze Age (Ha B) settlement in Senožaty there are two tiny spindle beads that are drilled on both sides and are identical to the bead from Jenišovice (Chvojka – John – Šálková 2012). A unique assemblage of more than 100 amber beads made part of a bronze hoard of the Knovíz-Milavče culture (Br D) in Radčice near Plzeň (Smejtek – Lutovský – Militký 2013, 293).

Subsidence in amber finds is not confined to the Czech Republic. It can be observed practically in the entire area of the Late Bronze Age Central Europe (Stahl 2006). There are even no amber finds from the Lusatian cultural milieu in northern Poland, that is directly in the

18 In this regard, it is also not too far-fetched to mention the possible analogy to the large-scale longhouses of the Knovíz culture (see faetures Nos. 420 and 1486 from IDEASTAV excavations) – J. Macháček (2015, 474–475) interprets similar large aboveground structures in early medieval Mikulčice as the quarters for the mass "storage" of prisoners of war, i.e. the future slaves.

area of natural occurrence of amber, and it is therefore likely that the shortest route for the spread of amber along the Vistula River actually lost its significance at the end of the Middle Bronze Age and did not regain it before the early Iron Age in Ha D[19] (Bukowski 1990; Dabrowski 1993, 111; Bouzek 1993, 142). Jutland peninsula is mentioned as the main amber supplier to the Elbe trade route, where amber is frequently present at sites dating to the Ha A2–Ha C2 horizon and where there is evidence of local production of complete items (Jensen 1982, 156). The discovery of lumps of raw amber from Obříství is a significant indicator in this context suggesting the transporting of not only finished products but also of raw material from the Baltic region (Fig. 8; Pl. 3/2), perhaps across the Jutland peninsula and further towards the interior of the European continent along the Elbe route. A proof of Elbe as the Ha A1 amber trade route may be the Ha A1/A2 hoard from Bischofswerda-Belmsdorf in Germany (less than 30 km north of the point where Elbe leaves the territory of the Czech Republic) which contained, amongst other things, almost 400 grams of raw amber (Stahl 2006, 46 with further bibliography; Bierbaum 1942, 216, Taf. 53.1).

The occurrence of amber in Scandinavia and in the Aegean, in contrast to the miserable situation on the continent, may indicate the existence of maritime trade[20] (Clark 2005; Ling 2012; Rottländer 1975, 15). The lively commercial and cultural interaction between Central Europe, Greece and the Western Balkans is indisputable especially during the later Urnfield period (e.g. Bouzek 1985, 85). This is documented, amongst other things, by the Mediterranean glass beads, which are much more frequently found in the Urnfield culture find context than amber (Venclová 1990, 42). This development is further suggested by analyses of the lead isotope and chemical data of a total of 71 artefacts or semi-products from Swedish Bronze Age based on a comparison with the data obtained from the ore deposits the functioning of which is expected during the Bronze Age (Ling *et al*. 2014). In summary, the composition of the artefacts dating back to 2000–1500 BC (Br A–Br B) correlates with the copper mined in North Tyrol, Cyprus and the Western Mediterranean area, while the artefacts from 1500–1100 BC (Br C–Ha A1) are associated with the mining districts located in Sardinia and on the Southern Iberian Peninsula. The copper from the largest set of artefacts from 1100–700 BC (Ha A2–Ha B) was extracted in the southern areas of the Iberian Peninsula and in the North Tyrol. The results of the analyses correspond with the major episodes of amber occurrence in the Aegean (1600, 1500 and 1200 BC), i.e. the period during which Cypriot copper was utilised for the production of Swedish bronzes. The provenance of copper from the North Tyrol suggests that it was transported to the north through Central Europe, in the context of the traditional Amber Route (Navarro 1925), which would confirm the earlier hypotheses on the supplying of Scandinavia with copper via Central Europe during Br A–Br B and Ha A2–Ha B, but surprisingly not during Br C–Ha A1 (Kristiansen 1998). In light of the results of these analyses, we can see that transport of metals to Scandinavia during the Bronze Age could have taken place along the two main routes – one of them maritime, Atlantic, which had already been trodden by the Bell Beaker culture and ran along the route South France – Garrone Axis – Brittany – the British Isles – Scandinavia, while the other, overland, ran via South East and Central Europe (Ling *et al*. 2014).

19 Also worthy of mention are the 60 kg of amber found in 1865 in Woskowice Male, Southern Poland, close to three rich Urnfield hoards (Dabrowski 1993, 111). Had the uncertain link between the amber and the bronze hoards been confirmed, it might suggest at least partial operation of the routes along the Vistula and the Oder Rivers in this period.

20 After all, this is also suggested by the find of a boats of respectable dimensions such as one from the 16th century BC in Dover (Clark 2004).

Although the copper mined on Cyprus could travel through Sardinia, where oxhide ingots of Cypriot copper are documented, another alternative is its transport further north through the Carpathian Basin (Primas 1997, 123), as is also indicated by imported artefacts from the Carpathian Basin that are found in Scandinavia during the Br A–Br B and the Ha A2–Ha B (Vankilde 1996). The trail along which the copper from the North Tyrol flowed could also have been connected to this system.[21] Therefore, most of the Austrian copper probably ran along the amber routes leading through Central Europe that had been already established during the Únětice culture period and this system was subsequently maintained by the Urnfield culture (Bukowski 1989; Sherrat 1993; Pydyn 1999). The new discoveries of amber in the Vltava and the Elbe river basins indicate the functionality of the long-distance overland and river routes that lead through Central Europe, along which, additionally, ore mined in the Mediterranean could also partially travel.

PORTS OF TRADE

The basic problem regarding long-distance contact between the Aegean and Northern Europe during the Bronze Age remains that this direct connection is evident in terms of the finds mostly of exported pottery in the Eastern and Central Mediterranean regions, whereas in Southeast, Central and Northern Europe this is not so clear (e.g. Earle *et al.* 2011). Naturally the range of materials and articles suggests a north-south connection, without, however, enabling us to develop a clear context or any other manner of approach that could bring this debate to a higher degree of certainty (Harding 2005, 47). There are several possible alternative trade models, describing how products could have travelled from their production areas to places where they were found (e.g. Stjernquist 1985, 71–77; Renfrew – Bahn 2002, 352). In case of European Bronze Age communities, long-distance contacts are usually assumed to have worked on the basis of a chain exchange or of a down-the-line system which ultimately eliminate any clear evidence of a link between Mycenaean Greece and Scandinavia. The physical distance between the main protagonists of long-distance exchange is undoubtedly a major factor in the quantitative absence of direct interactions; these relations and the actual trading between these societies could be imagined as carried out by independent trading diasporas that were responsible of the exchange of both prestige and bulk goods, while as imaginary ambassadors they were also busy brokering and negotiating diplomatic issues and the alliances between the elites of their day. The growth in trade that occurred during the Late Bronze Age is regarded an important factor of the manner in which the then society was constituted; trade specialists therefore may have played an important role whereby they were directly involved in diplomatic relations between the elites and basically became a part thereof. Trade could therefore be carried-out and administered through stipulated neutral zones – so-called "ports-of-trade" – which enabled the political elites, either in person or by proxy, to meet and to control the flow of imports and exports and also the redistribution of rare and/or imported items within their societies (Hirth 1978; Oka – Kusimba 2008, 345).

This very strict form of political control was not effective in regard to every aspect of production, distribution and consumption, including long-distance trade, and it is therefore likely that groups of manufacturers, distributors and specialised trading groups might have partially resisted against that control. For the elite it was much easier to control production and distribution through strategies of power demonstration and to collect tributes through

21 Recent lead isotope and chemical analysis of Scandinavian bronzes confirmed steady supply of copper (or tin bronze) from the Alpine regions throughout the Bronze Age (Ling *et al.* 2014).

covert or overt alliances than having to constantly maintain centralised control (Trigger 2003). It is therefore perhaps possible to deduce that the relative independence of traders, producers and artisans on political elites (Shennan 1993, 68) could lead to the creation of places with concentration of secondary production, competition, innovation and development (Oka – Kusimba 2008, 364). Analyses of various economic systems – from the Bronze Age Mesopotamia to the 19th century West Africa – have shown that placing too much emphasis on socio-political inclusion and/or on the control of pre-modern economies is erroneous (Lynn 1992).

From this perspective, the high concentration of evidence on bronze working in the microregion of Obříství and its surroundings would not be at all accidental. There are 13 stone casting moulds documented at six different sites in Central Bohemia in the Br D–Ha A1 horizon, with the strongest concentration to the north of present-day Prague,[22] while in the Ha B2–B3 horizon there are 32 casting moulds documented at six different sites in Central Bohemia, of which the total of 27 from the broader area of the Vltava/Elbe confluence and large collections were also found in Vepřek and Zvoleněves (Ernée – Smejtek 1998).[23] All the mentioned finds are related to lowland settlements and the map in Fig. 6 makes it clear that the find-spots of these casting moulds are spread within a radius of 20 km from Obříství, i.e. roughly the distance of a day's walk. The hoards that concentrate on the left bank of the Vltava River in the indicated transect date back mainly to the Late Bronze Age.[24] It is the localisation of the most frequent proofs of metallurgy during the Late Bronze Age in the north-western and Central Bohemia that could bear witness to the functioning of river routes – the Elbe and the Vltava Rivers – along which metals were transported, since long-distance trade routes have always been lined with associated specialised processing districts (Chvojka – Menšík 2014; Kelly-Bucellati 1990).

CONCLUSION

Based on the evidence presented above, we are inclined to regard the Knovíz culture settlement in Obříství as an important point of long-distance contacts during the Late Bronze Age. Its actual location at the confluence of the two largest Czech rivers that constitute natural communication axes in Bohemia, along with the finds of bronze swords in the Elbe River and its alleged ford, might be an indication that at that point of time Obříství represented an important communication node. Its origins can be placed to Ha A1, when a steep increase of population throughout the entire microregion can be observed. It is also to this period that the finds of raw amber from the settlement are dated and in which the Jenišovice hoard was deposited, containing – besides an amber bead – also 14 bronze cups with hammered decoration of the Jenišovice–Kirkendrup type, which appeared at that time across a wider swathe of European territory (Kytlicová 1959, 153). Also striking is the burial rite in the settlement pits in Zálezlice from Ha A2–Ha B1, which have analogies in areas from where, precisely during this period, Alpine copper was transported further north. In the Ha B1–Ha B3 period, the heyday of the Elbe route in the European trade, the

22 Suchdol, Úholičky.

23 Two crucibles are reported from Brozánky near Obříství in the wider Br D–Ha B horizon. The other finds are dated to the Late Bronze Age (Br D–Ha A) in only a generic manner and are represented by two moulds from the eponymous site Knovíz near Slaný and by one mould from Přemyšlení near Prague and also one from Tuchlovice.

24 Horizons: Plzeň-Jíkalka (Br C2/D) – Mělník; Plzeň-Jíkalka/Lažany (Br D) – Statenice; Lažany (Br D) – Stehelčeves, Velvary; Lažany-Suchdol (Br D/Ha A1) – Budihostice, Královice; Středokluky (Ha A2) – Středokluky; Jenišovice (Ha A2/B1) – Jenišovice; Třtěno/Hostomice (Ha B3) – Jarpice (Kytlicová 2007; Smejtek – Lutovský – Militký 2013).

population density in Obříství reached its peak, while in its wider hinterland it is possible to trace the most outstanding concentration of metallurgical production in Bohemia during that time.

The fact that the area of the confluence of the Vltava and the Elbe Rivers maintained its privileged position on long-distance routes is illustrated by the finds of elite items and imports during the subsequent period. The presence of distinguished individuals from the Late Hallstatt and the Early La Tène periods is confirmed by the skeleton graves with iron leaf crowns from nearby Vliněves, two bronze Etruscan bowls from the cremation grave in Hořín and a anthropomorphic bronze fitting from a drinking horn that came from a settlement pit in the same site (Chytráček 2015). A Bylany culture cremation grave from the Hallstatt period that was documented this year in Obříství contained a tiny fragment of amber (R. Brejcha, personal communication). Another Bylany culture cremation grave from nearby Uhy contained the first meander decorated vessels in Bohemia (Jiráň – Moucha 1992). Other categories of rare imported items found in an important regional Late Hallstatt centre of Minice – either with elite residential function or a cult site – include the oldest pottery vessel in Bohemia, produced on potter's wheel originating in the Carpathian Basin and also four twigs of sea coral from the Western Mediterranean (Trefný – Slabina 2015). Sea coral was also found in the La Tène settlement pit in Zvoleněves (Moucha 1980). Earlier extraordinary sporadic artefacts directly from Obříství, from the rich Germanic cremation graves, include Roman stamped bronze pan, fittings of a drinking horn, gold brooches with bulbous buttons or a head of a terracotta statuette (Beneš 2013).

N°	Cadastral area	Position	Dating	Finds	Bibliography
1	Obříství	Dušníky	Ha B	Large scale excavation IDEASTAV 2008–2011	Popelka – Šmidtová eds. 2014
2	Obříství	plot n° 75/1	Ha A1 – Ha B	Large scale excavation 2011	Pecinovská 2014
3	Obříství		Ha A1 – Ha A2	Two cremation burials	Brejcha 2013
4	Zálezlice	Pod Zálezlicemi	Ha A2 – Ha B1	Large scale excavation 2012–2013	Unger 2015
5	Chlumín	Na Višňovce	Br C2 / Br D	In 1937 (without any additional excavation circumstances) discovery of a massive graphiton coated cup with a cylindrical neck of the Lovosice type, characteristic of Central and Western Bohemia	Sklenář 1966, tab. XI, 315
6	Chlumín		Br C2 / Br D	A cremation grave containing a total of four vessels found near Zálezlice during the excavation of the road to Chlumín in 1921; its bronze inventory comprised two massive cast (and open) grooved bracelets of the Stehelčeves type, remains of elliptical trays with a handle, a pin with a seal head and a pin with a profiled ribbed head, a spiral rosette and fractions of twisted wire	Čermák 1921, 140 – 141; Jiráň 1991, 92
7	Zálezlice	within the municipality	Br D – Ha A	An undocumented intervention prior to 1983; a fraction of an amphora vessel	Archive ARUP

N°	Cadastral area	Position	Dating	Finds	Bibliography
8	Jenišovice		Ha A2 / Ha B1	The hoard that was ploughed-out in the field in 1897 comprised a total of 205 bronze items including various buttons, rings, tubes, torcs, sickles, lids with plastically articulated centres, helically wound armlets, shield bracelets with dotted decoration, two spiral rosettes, a large phalera with hammered decoration, a knife with a decorated back and blade, shield buckles with engraved and hammered decoration and – in particular – 14 bronze cups decorated with hammered decoration of the type Jenišovice-Kirkendrup. The hoard also contained a barrel-shaped amber bead	Kytlicová 1959, 146, tab. 11, 12:1–2, 13, 14:2; Kytlicová 2007, 267–268, tab. 98B; Píč 1897; Stocký 1928, tab. XLVI–XLIX
9	Mělník	Elbe River	Ha A – Ha B1	Two bronze swords of the Liptov type were picked-out from the Elbe River near Mělník prior to 1879	Sklenář 1982, 245, 73/9C; Sklenář 1994, 53; Zápotocký 1969, 304
10	Mělník	Tyršova Street	Br C2 / Br D	A hoard discovered in 1940, during the repairing of a road that comprised four fragments of sickles with vertical pins, two fragments of sickle blades, a fraction of the middle part of an axe, a triangular pendant with a loop and three lumps of raw material	Kytlicová 2007, 284, tab. 41:B; Smejtek – Lutovský – Militký 2013, 214
11	Obříství	Elbe River	Ha B	A bronze flange hilted sword was dredged from the middle of the river ca. 500 m below the weir at the point where the original river arm joins today's river in the direction from Dušníky	Zápotocký 1969, 304
12	Obříství	U Labe	Br D – Ha A	Shards of storage jars and coars small vessels were found in 1926 during the excavation of a well	Sklenář 1966, tab. XXX, 1135
13	Obříství	house n° 25	Br D – Ha A	An oval settlement pit with dimensions of 200 × 90 cm, that contained a fraction of a human skull, animal bones, 28 clay weights of troncoconical shape with an indentation on their upper surface, which apparently stood in an ash layer at a depth of 100 cm and lined the longer sides of the perimeter of the trench	Lüssner 1886–90, 168–169
14	Obříství		Br D – Ha A	Animal bones, daub and shards were found on the field between Obříství and the gardening centre at a distance of ca. 30 m southwest of the road	Archive ARUP
15	Obříství		Br D – Ha A	Weights in the shape of rounded truncated pyramids with a bore-hole and with a dimple on the top were found within the boundaries of the village under unknown circumstances	Archive ARUP

N°	Cadastral area	Position	Dating	Finds	Bibliography
16	Obříství	Kautschken	Br D – Ha A	A find of weights prior to 1900	Archive ARUP
17	Obříství	Na Štěpáně	Br D – Ha A	Field walking shard assemblage	Zápotocký 1962, 630
18	Obříství	Lamberk	Br D – Ha A	A cremation grave – the urn was found during the construction of a road in the late 19th century	Archive ARUP
19	Obříství	Dušníky	BrD	Pottery fragments	Jiráň 1991, 93; Sklenář 1985, tab. LXXII:5,6, LXX:17, LXVIII:29
20	Obříství	Na Štěpáně	Ha A1	A settlement pit was documented in 1949 during the rescue excavation in greenhouses	Koutecký – Spurný 1999, 314–315
21	Obříství	Dušníky	Ha B	A fraction of a conical bowl	Sklenář 1985, LXXI:43
22	Obříství	Dušníky	Ha B	Shards from the cultural layer found in the sewer line	Šmahelová 2009
23	Obříství	village square	BrD – Ha B	Four settlement pits that were carved into alluvial loam with a thickness of up to 100 cm were documented in the trench for the water supply that was being dug on the village square; The Feature No. 7, which contained a deposition of river shells, was dated into earlier to middle period, while the remaining features, some of which bore traces of fire activity, were dated to the period between the peak period and the Štítary phase	Bartošková 1991
24	Obříství	Semilkovice	Ha B	Aerial reconnaissance that was verified by field walking	Gojda 1995
25	Libiš	house n° 90	Br D – Ha A	The bottom part of a double-handled amphora that was found in 1901	Archive ARUP
26	Libiš	house n° 22	Br D – Ha A	Shards and animal bones in a private garden	Sklenář 1982, 194
27	Libiš	Na Medvědu	Br D – Ha A	Graphiton coated and grooved shards of a tray amphora and a cup from surface collections that were carried out by K. Žebera in 1942	Sklenář 1982, 195
28	Libiš	house n° 76	Br D – Ha A	A settlement pit was encountered during the excavation of the drain trench contained several coarse shards decorated with finger impressions and also a skulls of two or three deer with beautifully structured antlers	Sklenář 1982, 195
29	Libiš	U dlouhé meze	Br D – Ha A	Shards of large containers and earthen weights were discovered during the digging of a well in 1979	Archive ARUP

N°	Cadastral area	Position	Dating	Finds	Bibliography
30	Libiš	U tůně	Br D – Ha A	Shards decorated with finger impressions and part of a double-handled vessel was found during the construction of a factory in 1943	Archive ARUP
31	Libiš	house n° 140	Br D – Ha A	A cremation burial consisting of two large barrel shaped containers and a bowl or a plate with twisted edges containing charred bones originating from the excavation for water supply in 1961	Sklenář 1982, 195
32	Libiš	Elbe River	Ha B	A bronze flange hilted sword was found during dredging of the riverbed on the eastern bank ca. 100 m above the mouth of the Košátecký Creek	Zápotocký 1969, 304
33	Tuhaň	house n° 10	Br D – Ha A	A settlement pit was encountered in 2003 during an excavation of gas pipeline trench	Archive ARUP
34	Kly	A. Lhotský's field	Br D – Ha A	A cremation grave comprising four vessels	Sklenář 1966, 42/4a
35	Brozánky		Br D – Ha B	Multiple significant settlement and funeral activities of the Knovíz culture were documented in the cadastral area of the village	Archive ARUP

Tab. 1: An overview of the documented activities and finds of the Knovíz culture in the microregion of interest. The numbers in the first column correspond with those of the map in Pl. 3/1.

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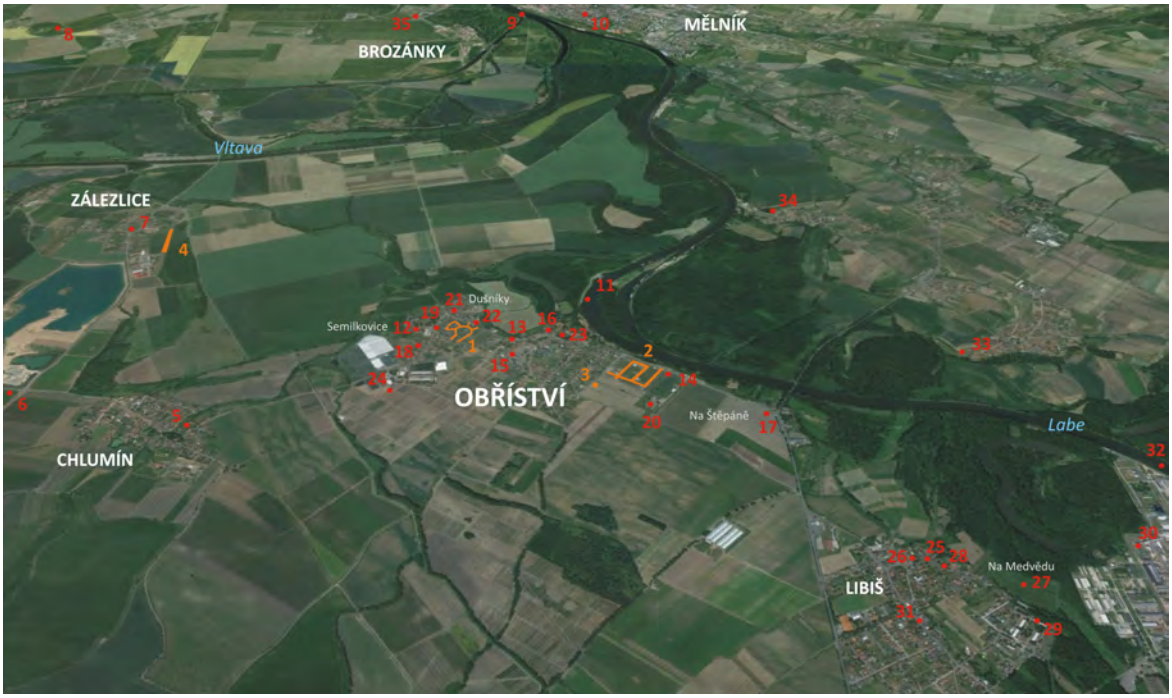
Pl.2/1: Fotografie nalezeného hrotu kopí (autorka fotografie D. Malyková).
Pl. 2/1: The Nesměň spearhead (photo by D. Malyková).



Pl. 3/1: Map of the Knovíz culture settlements in the microregion of interest; for descriptions of the individual items see Tab. 1 (the scale changes with the perspective).

Pl. 3/2: Raw amber lumps from Obříství excavation 2011.