

Archaeology of Conflicts II

Pavel Drnovský – Petr Hejhal – Ladislav Rytíř (eds.)



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The archaeological evidence of conquest of an Early Medieval fortified site / residence on the example of the Kal stronghold (Pecka), Jičín District

Nada Profantová

Abstract: *Violent destruction of Hill-fort Kal (Eastern Bohemia) and its archaeological manifestation. The collection of metal finds from the Kal hill-fort mostly from prospection with metal detectors shows the archeologic manifestation of the violent destruction of the stronghold (more than 106 arrowheads, 6 axes and some decorations of horse-harnesses or parts of horse –bits). The analyses of the distribution of the finds as well as dating of the bronze decorations has shown the act of violent destruction of the stronghold that was probably caused by the conquest of an army composed partially of warriors from the Avar Khaganate who used three-ribbed type of arrow-heads. We could date the destruction to the end of the 8th century or to the beginning of the 9th century.*

Key words: Early mediaeval – east Bohemia – hillfort – arrowheads

Introduction¹

The conquest of settlements usually leaves clear archaeologically detectable traces – burnt layers, large concentrations of weapons (mainly arrowheads – the cheaper ones), sometimes even human remains – only shallowly buried or even unburied (e.g. in fortification ditches, see Stará Kouřim, Němčice – burnt body; Šolle 1966; Michálek–Lutovský 2000, I, 232–233).

In Bohemia, intensified attention of archaeologists was paid to the important issue of Early Medieval studies – the emergence of the earliest strongholds – only in the 1960s and later in the 1990s (Bubeník 1998; Profantová 1998). The earliest Bohemian strongholds attested archaeologically are dated to the end of the 7th or at the turn of the 7th / 8th centuries but without radiocarbon or dendrochronological dates of their fortifications, f. example Doubravčice (Profantová 1998) or Klučov from the same group (Kudrnáč 1970; Bubeník 2001). As far as dating of the strongholds' appearance is concerned, a group counting altogether 14 to 19 sites can be recognized — one that appeared before the second third of the 9th century (from the 168 dated to Early Middle Ages – fig.1), — 14 of them are newly presented in Atlas of the hill-forts (Salač et al. 2019, K. 27).²

Specific position in this group of oldest hill-forts has Kal, dist. Jičín, the hill-fort standing relatively alone in the North-eastern part of Bohemia. It seems highly plausible to connect the significance of Kal stronghold with protecting of communications crossing the Bohemian border woods and heading towards Kłodzko and Poland.

¹ The paper was written with support de of a grant GA ČR „Between the Avar and Carolingian Empire“ N. 18-00477S.

² Only four of them were excavated on a larger scale, Doubravčice, Klučov, Toušeň, and Tismice. Most of them were not excavated with the use of modern methods including ¹⁴C dating, the exception are Tismice (Profantová et al. 2020).

In this article, I will concentrate on the problem of its violent destruction. This destruction is an important moment allowing the extinction to date relatively accurately without exact dating methods. At the same time, it may be one of the oldest military destructions in the early Middle Ages in Bohemia.

Characteristics of the site

Kal was a rather small probably undivided stronghold without extensive economic hinterland (exception is settlement Vřesník, Zeman–Buchvaldek 1967) that was re-fortified Prehistoric site from Lusitanian culture, Silesian-Platěnice culture of Early Iron Period: HaC, HaD (Kalferst – Profantová 1999; Profantová 2020a).

Kal stronghold (site Valy, Vala) in north-eastern Bohemia covers 7.1 ha (290 x 260 m)³ and was fortified in the 8th century by an earth-wooden rampart that was in some parts strengthened on the exterior by stones and a ditch (fig. 1, 2). Stones could be a part of the wall on this part, the documentation speaks about the destruction of it (layer N. 8 in Trench VII, only 40cm wide, Kalferst – Profantová 1999, Fig. 2), the small ditch is before the fortification (only 110 cm deep). The inner line of fortification has also 1m wide berm. Another part of fortification might also have a back fortification wall (Trenches I and II/85). Early medieval dating of fortification is undoubtedly in the southern part- in trench I/88, in northern part the early medieval fortification was built on the destruction of inner line of prehistoric one. Only simple settlement features above ground have been found so far and no defined settlement structure could be observed. This did not change the magnetometric measurement of the part of the inner area by R. Křivánek in 2010.

The prospections with metal detectors were made up 2011 only by amateurs, in 2011 and 2012 also organised by N. Profantová. Besides these documented finds, the landowner F. Posselt, who used to plough parts of the stronghold's area before the time of the Second World War, had numerous strap-ends or fittings in his private collection (Profantová 2020a, 167), mostly undocumented. Due to the fact, that this collection was not available for the author's research (if it still exists), it remains unknown, how many of the finds were Early Medieval.

The important information is about digging activity in the Year 1903. The teachers and F. Posselt have found a horse skeleton "with articulated buckles" near the central road.⁴

A bronze circle phalera(?) and an iron arrow-head was found in the Field of Mr. Fejks (phalera could not be dated as it is no longer extant, arrow-head with the twisted neck is early medieval).

Artefacts: militaria and decorations

The majority of these finds were found only slightly sunken below the ground and some of them also on the hillside outside the stronghold's fortification (fig. 2). The rather numerous group of metal objects retrieved from the site counting approximately 185–195 pieces does not include spurs with hooks that would have indicated the presence of local horse riders.

The metal finds consist of elite male decorations (7 pcs, Tab. 1, Fig. 3), horse-harness decorations (5 pcs) and horse equipment (3–4 pcs), military equipment: minim. 119/120 pieces and tools 6–8 pcs including parts of buckets. Every-day life is represented by pottery (only one complete pot Kalferst – Profantová 1999 with fig.), a steel-striker, a scythe and a punch –tool.

³ The stronghold area could be larger, if it has fortified suburb, it indicate old drawing from the 50th of 20 century, Čtverák et al. 2001,120). But we do't know in which chronological period.

⁴ Unpublished, only an archival notice of the Manual of the town Pecka (p. 114) – see Note 7.

Belt and Horse-harness decoration

Between the decorations (14 pcs), there are 5/6 pieces typologically from the 1st half of the 8th century (Tab. 1, fig. 3: 4, 5, 7, 8, 10, 13?). The latest finds were produced at the end of the 8th century, especially the new small fitting with engraved decoration (fig. 3:12), and two decorations of harness (fig. 3: 6, 14). Both late decorations have analogies in area of Komárno – Iodénica, SK (Trugly 1993, Taf. XXVIII)⁵ and smaller one – three-armed mount of the horse-harness – also in Moravia (Mikulčice, Moravský Krumlov- Krumlovský les, Profantová 1992, Taf. 25:12), newly also in Middle Bohemia (Tismice and Lipany- Profantová et al. 2020, fig. 28:16 and Profantová–Militká–Šámal 2022).

The wildfire in the area of the stronghold is indicated a partially melted rectangular fitting with a gryphon decoration that had replaced rivets – the new rivets were made only of iron (fig. 3:5).

The most prestigious is the Byzantine- Mediterranean type of fitting with a motif of a dragon/ bird of prey fighting with a snake as a symbol of the fight between good and evil/bead (fig. 3: 4) with an analogy in Blato, Pardubice district as well as in Carpathian basin (4 sites, Kalferst- Profantová 1999, 300, Tab. 3). The nearest find was found in Vienna – Csokorgasse (Daim 2000, Abb. 45).

	LAP II	LAP III–IV	Gilded pc	together	Note
Strap-end	2			2	LAP 1–2
Main belt fitting	3	1		4	1x pendant
Buckle	2			2	1 without plate
Mounts of secondary bands of belt				0	
Harness	2	2	3	4	1 z LAP III incomplete
Fitting					
Jingle-bell		1 ? later		1	Slightly atypical
Bridle		2		2	

Tab. 1. Decorations of Late Avar type after their position in the belt and function, also chronological position. LAP: Late Avar Period.

Arrow-heads and other weapons

A concentration of the finds of Avar Khaganate origin – as mentioned above – could be most probably related to the time of its violent destruction, attested by 110 iron arrow-heads of the 5 main types (with variants, practically complete bohemian scale, only rhombic type absent): The main types of arrow-heads from the Kal after a combination of the shape of blade and cross-section of the blade (fig. 8a): both main characteristic are in my opinion the main functional determinants. In the categories local and nomadic the tang in connection to the shaft is the typical nomadic solution (variant), socketed ones are mostly local but rarely were presented also in the burial ground of Avar Khaganate period (in combination with other types, Holeščák 2015).

1a: socketed and barbed – with hooks/ wings (type VI Holeščák 2015, Fig 1)

1b: socketed (with long socket) with twisted neck and wings

The wings could be short or long.

2a. socketed leaf-shaped arrow-head (Holeščák's AI0)

⁵ The mount with a large rectangular pendant is unique, the analogy has another plant decoration.

- 2b. two-edged leaf-shaped with tang (type I and II of shape Holeščák 2015, Fig 1, AI1), cross-section A (flat)**
- 3. three-ribbed /lateral arrowhead with tang, cross-section B**
- 4a. socketed spike, cross-section round (also twisted)**
- 4b socketed spike, with a square cross-section, often twisted**
- 4c similar with tang with a square cross-section, eventually rhombic (VIII C- in the terminology of Holeščák)**
- 5. only socketed part**
- 6. socketed three-ribbed/lateral arrowhead**
- 7. only a small part**

The 49 of the arrowheads have their exact position in the plan (fig. 2), the area of the high density of them is visible (violet colour). Two of the arrow-head were found exactly in the northern part of the wall (No. 7 and 28). The three-ribbed No 61 and another one, as well as the No. 19, were on the borderline of fortification (fig. 2).

If it was possible to capture the orientation of the three-edged arrows (approximately only in 4–5 cases), they headed towards the fortified area.

The arrow-heads, especially of type 1 and 2, are not optimal finds for dating, but in the concrete case of Kal is advantageous for us to find out that the stronghold was not restored after its demise; only one of the arrow-heads of type 1 (with wings wide open) is probably later, from high Middle Ages (14th century, Fig.7:6). 9 of them have twisted neck or in one case is twisted spike. The largest pieces were long **106** and **101 mm**, one is socketed, second is type 2a with triangle-shaped leaf and with tang (Inv. N. 103146, museum Hradec Králové). Most of them are between 61–88 mm long. Only 3–4 small parts of the arrowheads are unclassifiable, 6 parts are smaller than 50 mm.

Graph fig. 8 shows: **48–49 % (52 pc)** of them are socketed and barbed arrowheads (wings) typical local production (Fig. 7); 22/23 pieces (**21, 5 %**) represent the so-called three-ribbed arrowheads (type 3) that are regarded as being of Avar origin (Fig. 6, Profantová 2003, obr. 3:7, 9–14, 5:1–6, Profantová 2020a, Fig.9; Vích 2011). Among the three-edged arrowheads there was also an arrowhead of unusual dimensions, its tip 80 mm long and a spherical extension follows, the tang is missing in this case (originally it could be about 120 mm long or more).

Two of them are three-edged socketed (fig. 6:14; 7a, no. 25 and 97), which means special type, with analogies only in Šebastovce (E Slovakia), gr. 114 (Tab. 3, Budínský – Krička –Točík 1991, 31, Taf. 17), Dolní Dunajovice (S Moravia), gr. 2b (Klanica 1972, 10, tab. 4), and Prušánky (Moravia), gr. 663 (3 pieces), dated to the 1st third of the 9th century (Klanica 2006, Tab. 92:4–6). This type is mixed (with characters of 1 and 3), and used to be produced on the Avar-Slavic border (Profantová 2020a). 16 percent are leaf-shaped arrowheads, mostly socketed, only in two cases are with tang (cf. tab. 2). Spikes (type 4) are only 6%, 4a, b with socket there have analogies especially in Moravia, for example in the ditch in Staré Město – Na Valách, dated to the beginning of 9th century (Hrubý 1966, fig. 6:3). But they could be dated, especially pieces with square cross-section –type 4b and c with a tang to the Avar Khaganate period (they are relatively rare – Holeščák 2015, 300), but also to the 10th–11th century (in connection with Old Hungarian milieu).

Number arrow-heads with tang	Number arrow-heads with socket	Number arrow-heads with twisted neck	undeterminate
27–29	66	10	3–4
26–26,3%	61, 7%	9,30%	2,6–2,8%

Tab. 2. Kal. The number and percentage of arrowheads with a tang and socketed.

Site	Grave N.	Arrow-heads together	three-ribbed type	Wings and socketed	two-edged leaf (type 2)	others
Budapest Püspökladány	9	14	9	1	3	1
Dolní Dunajovice	2b	6	2	3	1	–
	9	6	1	5	–	–
Jászapáti	110	7	7	–	–	–
Leobersdorf	44	7–8	5	–	2	1
Kornye	18	9	9	–	–	–
Kornye	78	8	8	–	–	–
Pecs-Köztető	36	7	5	–	1	1
Šebastovce	114	4	1+ 1	1	1	–
Šebastovce	149	7	-	2+ 1 special	3	1
Devín. Nová	784	5	4	–	1	–
Ves						
Linz-Zizlau	74	12	9–10	1	–	1 with tang

Tab. 3. The content of some quivers according to the main types of arrows-heads in Carpathian basin and Upper Austria from 6/7–8th century. Only Dolní Dunajovice is situated in Czech Republic (Klanica 1972). Only in 6/7. century three-edged arrow-heads are 100% (Kornye). After various basic monographs made by author.

Similar cumulation of three-edged arrowheads and weapons in the hill-fort was found in eastern Europe in Nikodimovo, which is dated to the 7th century. 17 three-edged arrowheads and three lanceheads were found there (Kazański 2015, Fig. 2:3–5, 5: 10–26). It was interpreted as a destructed residence of a member of an elite.

The structure of the set of arrowheads corresponds both to the structure of some of the contents of the quivers in the Carpathian Basin (cf. tab. 3, in some of them there is % of three-ribbed pieces higher, especially from the Early and Middle Avar period) and to the later set from Nemětice, where the three-ribbed arrows are replaced by rhombic ones (Michálek–Lutovský 2000).

Other finds comprise of 7 more or less incomplete axes (fig. 5: 1–7, Profantová 2003; Profantová 2020a, fig. 7:5, 9: 8, 13); Only two of them can be classified typologically as Moravian type (hammer-axes) with triangular “tang” and dated to the 8th–9th centuries (especially fig. 5: 4, Profantová 2003), three of them are “narrow” type, which is relatively earlier. One of them (fig. 5:3) also went through a detailed analysis of its way of production, which was quite uncomplicated – only one example with laterally welded-on cutting edge (Profantová 2003, fig. 6, sample 759). Only one piece (Fig. 5:1) is a ‘bearded axe’ typical for the 9th–10th century in Bohemia (Profantová 2020b). The small part of the blade of a dagger (small sword?) – 50 mm long after metallographic analysis (in 1998) was interpreted as a part of an Early Medieval weapon without the possibility of any typological conclusions (Fig. 5:7, Kalferst – Profantová 1999, Fig. 8:18).

The find of 2 pieces of the iron spear-shoes (fig. 4: 8, 9) are of the western type with analogies in burial-grounds in Baden, Weismain-West, Ketzendorf in – a western milieu, all dated to the 8th century (Schwarz 1984, Abb. 59:2) and they are the oldest in Bohemia (later and more luxurious one is from the Kourim Burial ground, grave 55, Šolle 1966; Profantová 2014a). They may also be connected to the presence of warriors.

The set of pieces of evidence of warriors presence complete the two bridle side pieces of eastern origin (fig.4:3, 4) and minimally one iron saddle-spikes buckle (fig.4:7). The bridle side one with es-shaped sideboard ended with an animal head has an analogy for example in Komárno- Lodenica in the 8th century, the other more untypical with two ovals in the middle in Romania, which is dated to the 6–7th century (Izvoare – Bahna, Mitrea 1998, Fig. 27:9). This eastern type is older and after Kirpičnikov related to the nomadic milieu, concretely Avars (Kirpičnikov 1973, 15–156). It had to be a part of the equipment of an alien/foreign warrior.

The majority of these finds were found only slightly sunken below the ground and some of them also on the hillside outside the stronghold's fortification. The rather numerous group of metal objects retrieved from the site counting approximately 185–190 pieces does not include spurs with hooks that may indicate the presence of local horse riders.

Hoard

The sudden destruction of the stronghold can be indirectly corroborated by a small hoard of iron tools (a scythe 154 mm long originally in two pieces with an iron ring 46 mm in diameter, and a woodworking tool ? with a shaft 122 mm high, awl/pricker 89 high), which could be –after analyses of tools dated only to the 8th–10th century, but in context of the destructed hillfort the connection with the time of the catastrophe is most probable.

Other weaker indications represent the burnt corns found in a vessel's base (Kalferst – Profantová 1999 with excursus E. Ulrychová) and a partly melted fitting with a gryphon decoration that had replaced rivets – the new rivets were made only of iron (fig. 3:5).

Conclusions

Minimally 121 items without the iron buckles and without the part of belt-fitting can be linked with the military campaign in general (including 4 decorations of horse-harness). The concentration of arrowheads at the perimeter of the hill-fort and a relatively high proportion of three-edged arrowheads together with a concentration of Late Avar type ornaments enable me to the interpretation of the situation as a violent downfall of the hill-fort to the interval 790–815, historically to the interval in which older part the Charles the Great organized the wars against Avars/ Avar Khaganate (*Annales Regni Francorum* ad. 791, 795, 796). In any case, we have before us the evidence of the early medieval battlefield (for those in our country Krejsová – Vachůt – Hejhal 2008, Fig. 1).

One part of the Frankish armies crossed Bohemia on its way to Pannonia in the year 791 and returned using the same way. The other historical frame is the plundering of Middle Bohemian territory, especially the Elbe region, during Frankish campaigns in 805–806 (Profantová 2020a).

A troop from southwest Slovakia (the area between Komárno and Vienna) or more broadly from the territory of Avar Khaganate most likely joined in the seizing of the hill-fort. The majority of the finds (arrowheads, cf. Tab. 3, fig. 8b) belonged more likely to the conquerors rather than the defenders.⁶ The rather numerous group of metal objects retrieved from the site counting approximately 220–230 pieces does not include spurs with hooks that may indicate the presence of local horse riders (cf. Profantová

⁶ Unfortunately we do not know of any burials current with the hill-fort, only one old information about a horse burial with some decorations digged in 1903 inside the hill-fort (F. Posselt) – but without visual documentation (see above), only an archival notice of the Manual of the town Pecka (p. 114).

2016a, b). The horse-burial indicate the presence of rider/s, we do not know if foreign or local origin. We do not know also the reasons for the conquest of the hill-fort and we will never know. The situation is comparable with the evidence of other Early Medieval destructions from Czech Republic, Austria and so on (Tab. 4), mostly dated to 10th century.

So far, only two strongholds in Bohemia that ceased their existence at the end of the 8th century are available for scientific evaluation: Kal and Doubravčice on the eastern edge of central Bohemia. The so-called central building located on the acropolis at Doubravčice was burned.

Layers corroborating fire have also been detected in the rampart (in its 2nd phase, which is also the 1st Early Medieval) separating acropolis and bailey (Profantová 2016; Profantová 1998, fig. 16 and 2). However, it can't be decided with certainty whether the fire was caused by a military campaign or whether it was accidental.

More numerous archaeological traces of war conflicts in Bohemia date back to the 10th century (Budeč, Němětice, Kouřim, cf. Štefan et al. 2016) even though they exist in the written sources from the whole 9th century.

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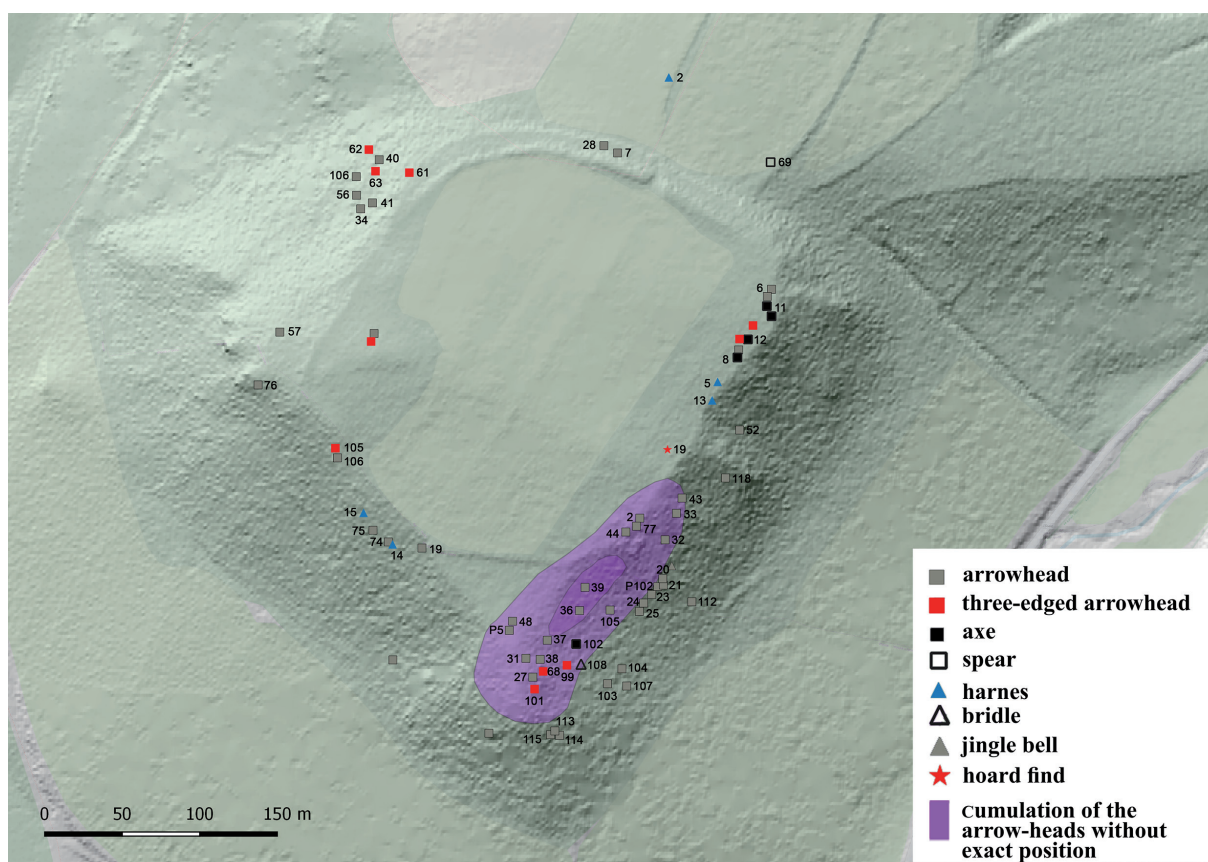
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1 Kal, distr. Jičín. According to Profantová 2020, fig.



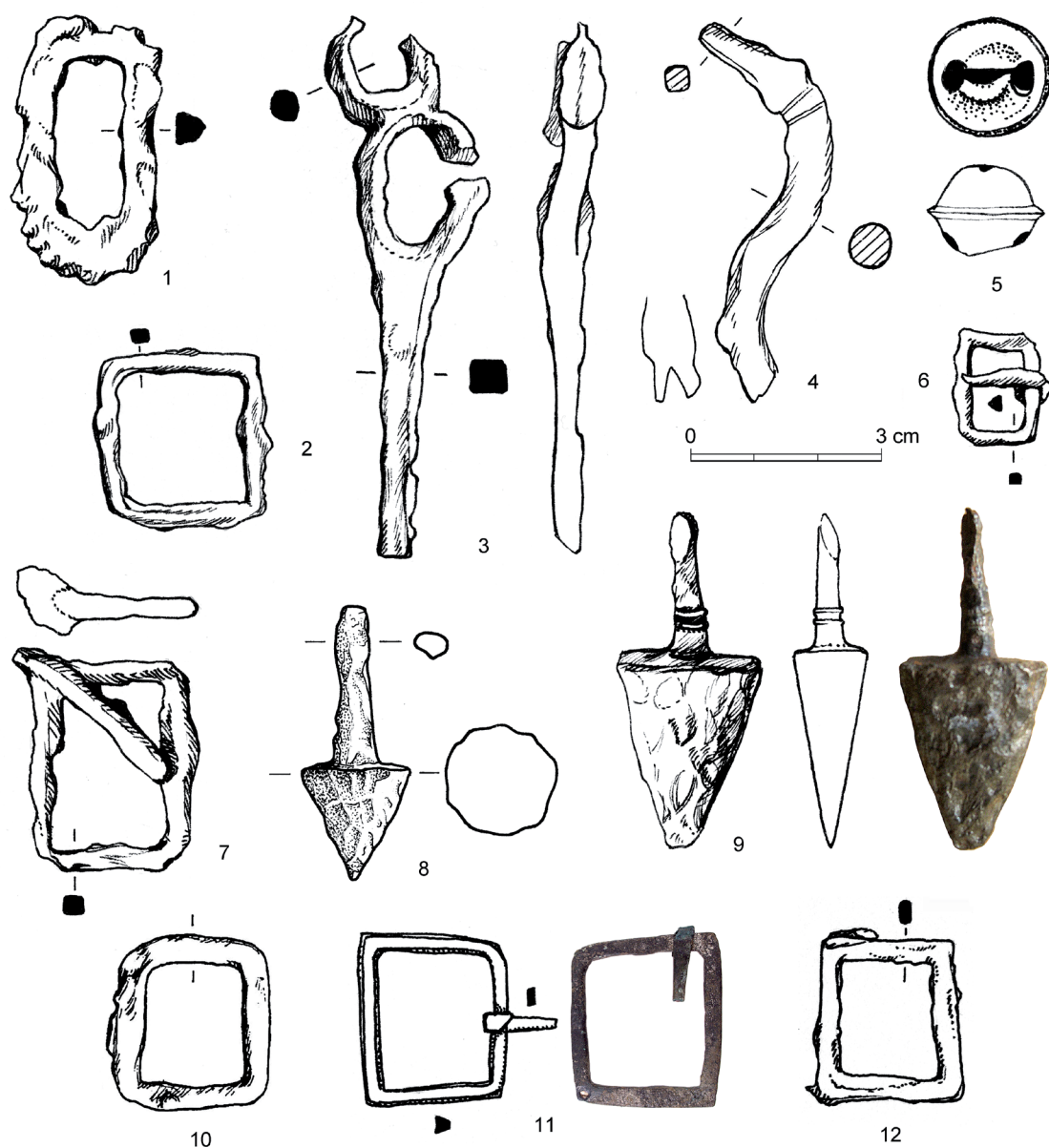
1b View from the Hinterland. Archiv Arup Praha, vv.i. P 6140066.



2 Kal, distr. Jičín. Lidar scan of hill-fort, distribution of weapons and harness items. Graphic K. Levá.



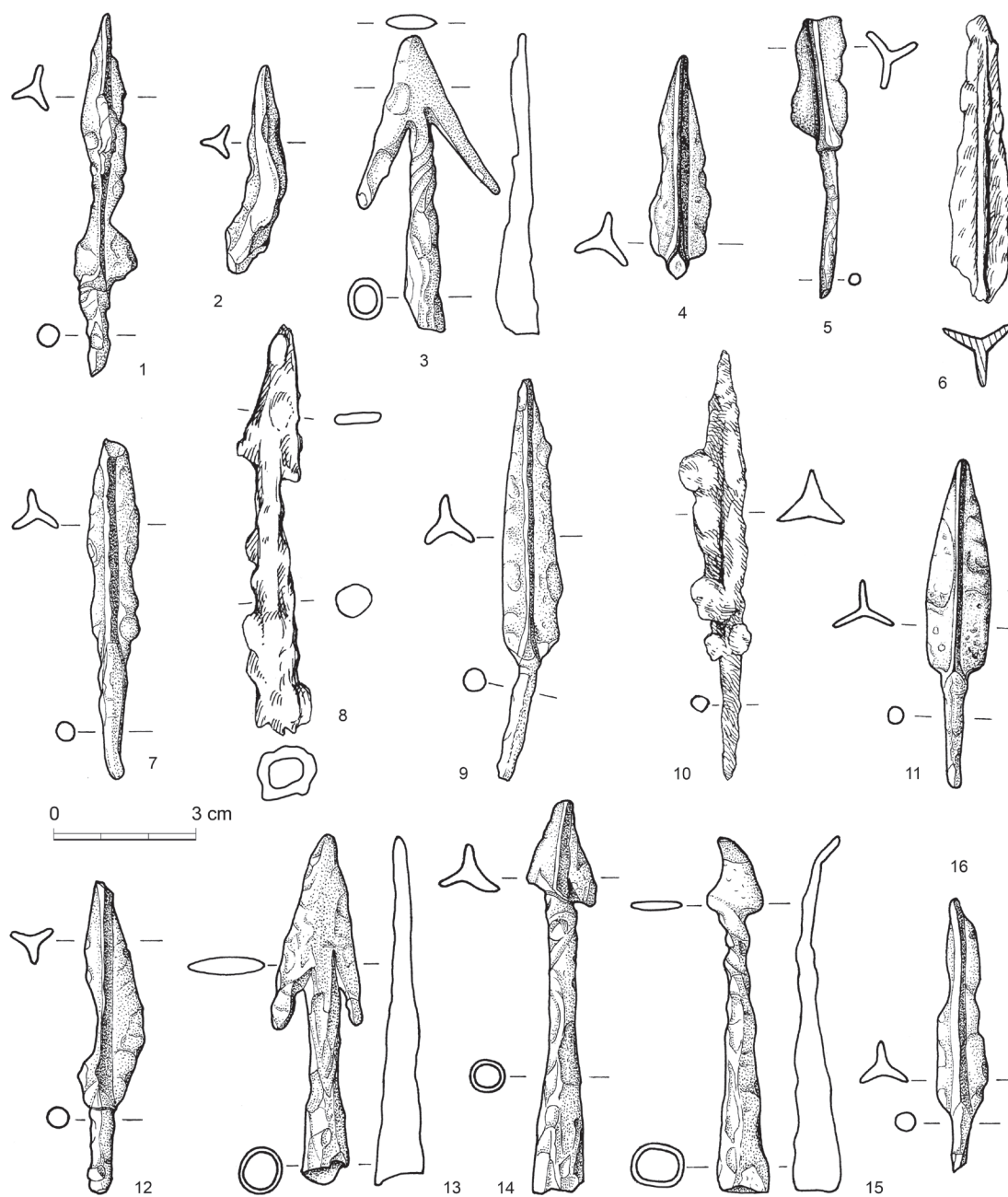
3 Kal, distr. Jičín. Finds of Byzantine-Late Avar type (except No 11). 8th century. 2, 3 gilded. 11 silver, rest copper or copper alloy. 1–11, 13–14 After N. Profantová 2020a, Fig. 7, 8, Photo N. Profantová and L. Raslová, R. Bláha; 12 drawing L. Raslová.



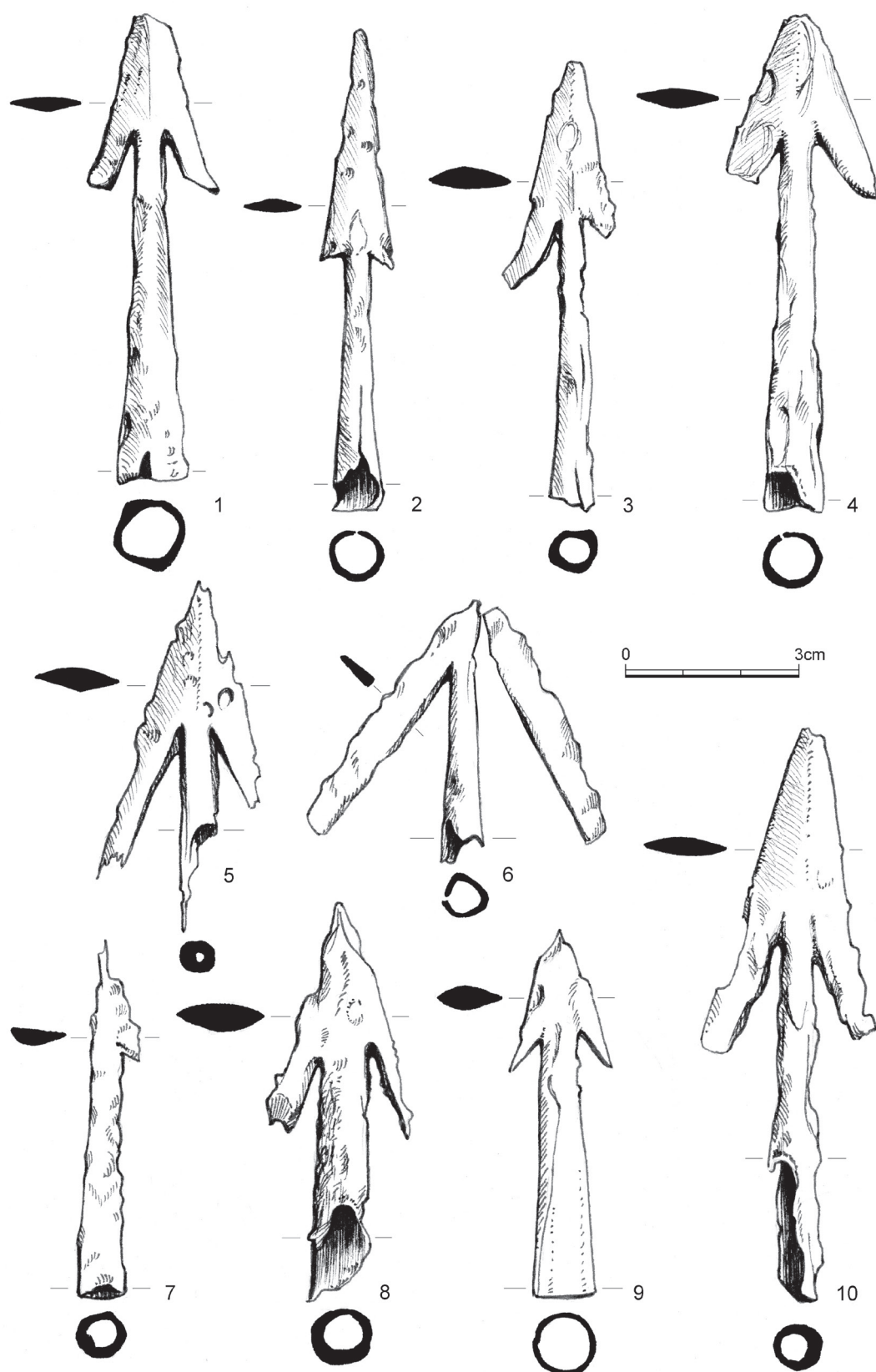
4. Kal, distr. Jičín. Selected finds (3, 4 bridles, 8, 9 spear shoes): 11 silver and copper alloy, 10 copper alloy, 5 copper, rest iron. 8th century. 2?, 3, 4 After Kalferst/Profantová 1999; 9, 10, 11 according to Profantová 2020a, Fig. 8; 1, 6, 12 drawing L. Raslová.



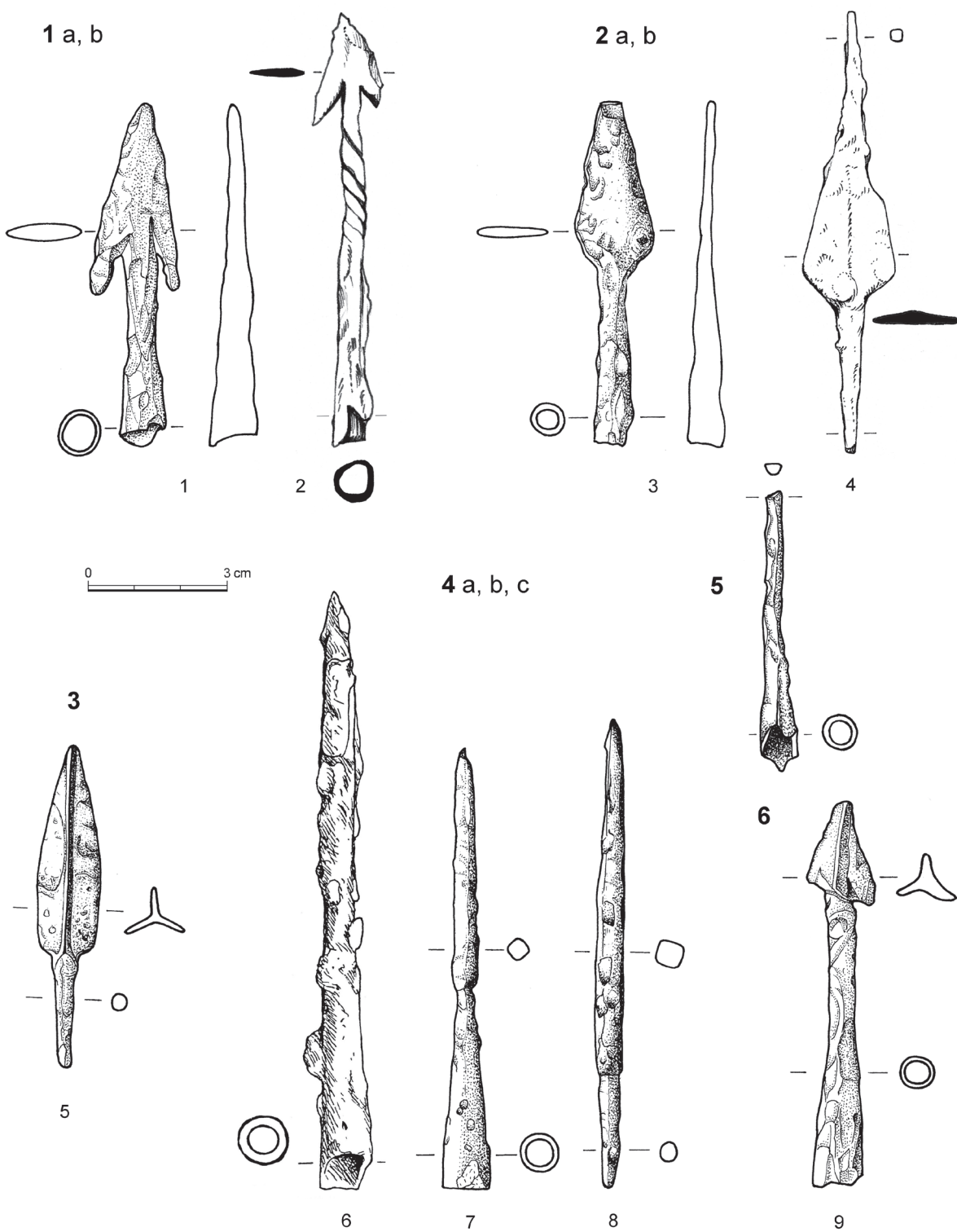
5 Kal, distr. Jičín. 1–7 axes, 1, 3, 4, 9, 10 according to Profantová 2020a, Fig. 8 and 9. 7 according to Kalferst – Profantová 1999, obr. 8:18, rest unpublished. Drawing D. Čechová.



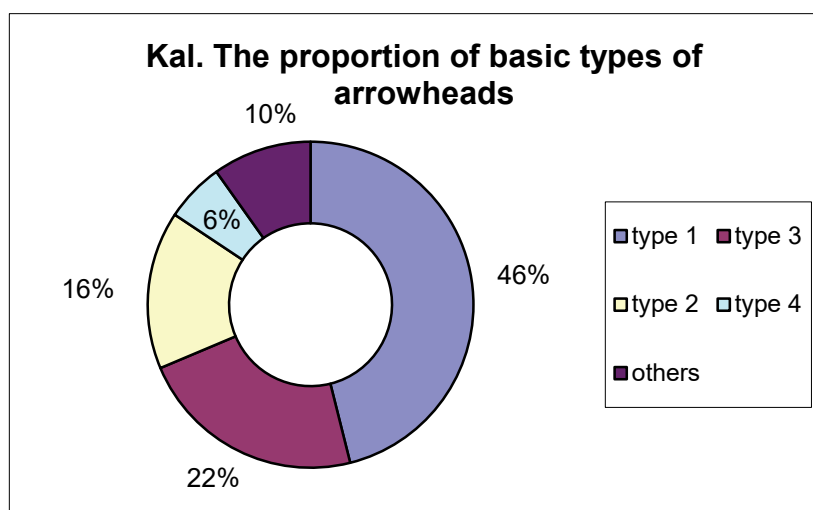
6. Kal, distr. Jičín. Finds of arrowheads. According Profantová 2020a, Fig. 9.



7. Kal, distr. Jičín. . Finds of arrowheads. Unpublished. Drawing D. Čechová.



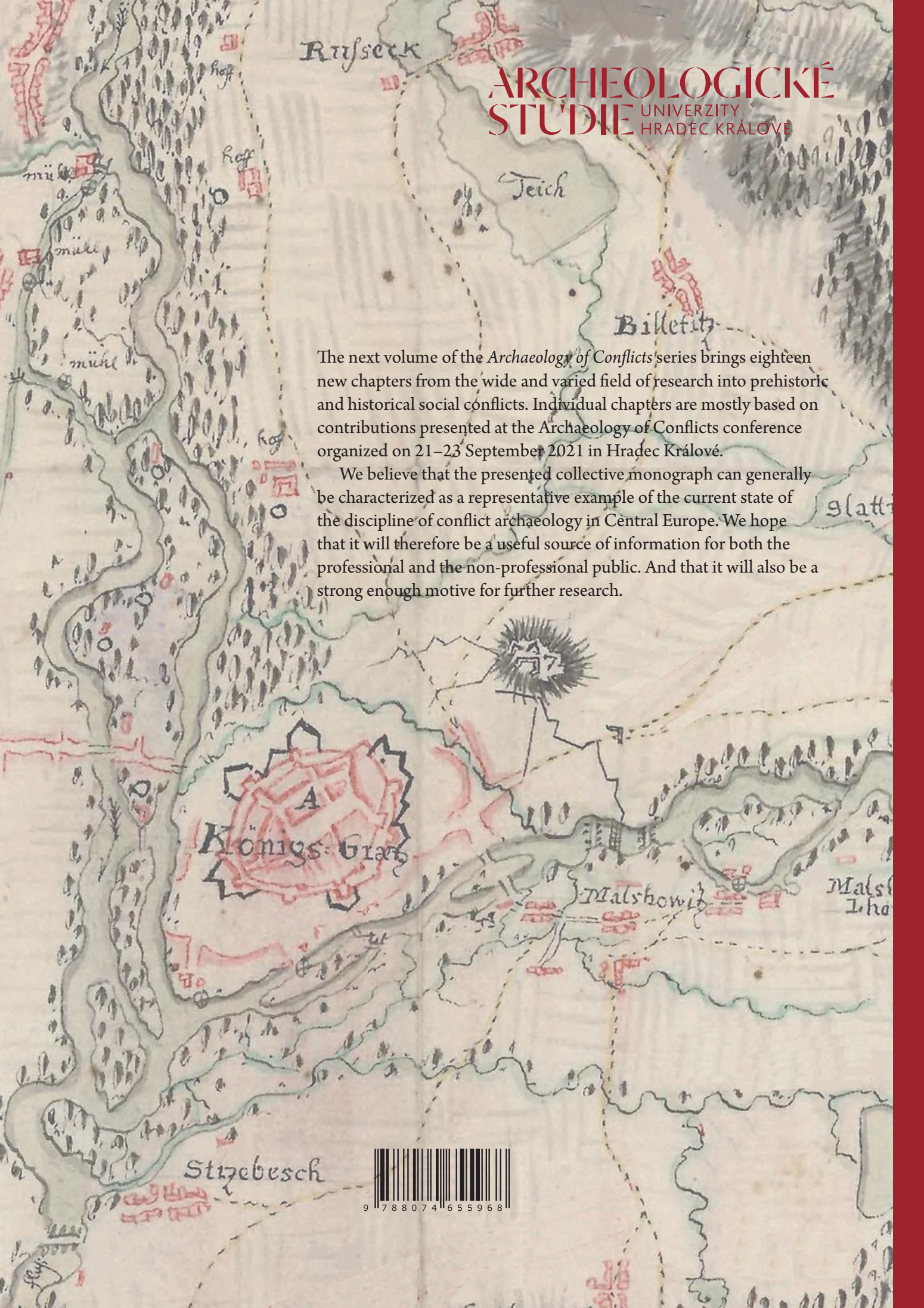
8a. Kal. Basic types and variants of arrowheads.



8. b Graph. The proportion of basic types of arrowheads (1–6, type 3 + 6 in one category, others is 10%, mostly category 7).

Site	Type of site	Area of hillfort	Number of arrow heads	Special types of arrow heads	Dating of destruction	Spurs, other weapons	Interpretation
Kal	stronghold	7.2–7.3 ha	110 (with points)	22–23 three-pointed	790–811	5–6 axes,	Conquest partly caused by
						2 spear shoe	the Avar army
Chotěbuz-Podobora, Silesia	stronghold	1.75 ha	30 + X	?	900–915	2 axes, 3 spurs, stirrup, branks	fire of the bailey connected with siege??
Mikulčice	stronghold	8 ha	more than 130 from both Periods	X three-pointed	about 800?	axes, mace head, bow, spurs-more than 60	Fire connected
				Min. 6			with siege??
	stronghold			70-80 rhombic	905/906	axes, swords, sabre, spear, spurs	Conquest, Early Magyar army
Němětice	stronghold	0.9–1 ha	99	22 rhombic,	905–940	axe, in the vicinity spear point	Conquest, Early Magyar army
				1 forked			
Smolenice-Molpír, Slovakia	hilltop settlement or stronghold				around 800	axe, 5 spurs, bridle, chain armoured	?

Tab. 4: Sites with evidence of martial destruction from the Czech Republic, Slovakia and Austria. Němětice after Michálek –Lutovský 2000, Chotěbuz-Podobora after Kouřil /Gryc 2011, Mikulčice 905/6 after Kouřil 2003.



ARCHEOLOGICKÉ STUDIE

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The next volume of the *Archaeology of Conflicts* series brings eighteen new chapters from the wide and varied field of research into prehistoric and historical social conflicts. Individual chapters are mostly based on contributions presented at the Archaeology of Conflicts conference organized on 21–23 September 2021 in Hradec Králové.

We believe that the presented collective monograph can generally be characterized as a representative example of the current state of the discipline of conflict archaeology in Central Europe. We hope that it will therefore be a useful source of information for both the professional and the non-professional public. And that it will also be a strong enough motive for further research.



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