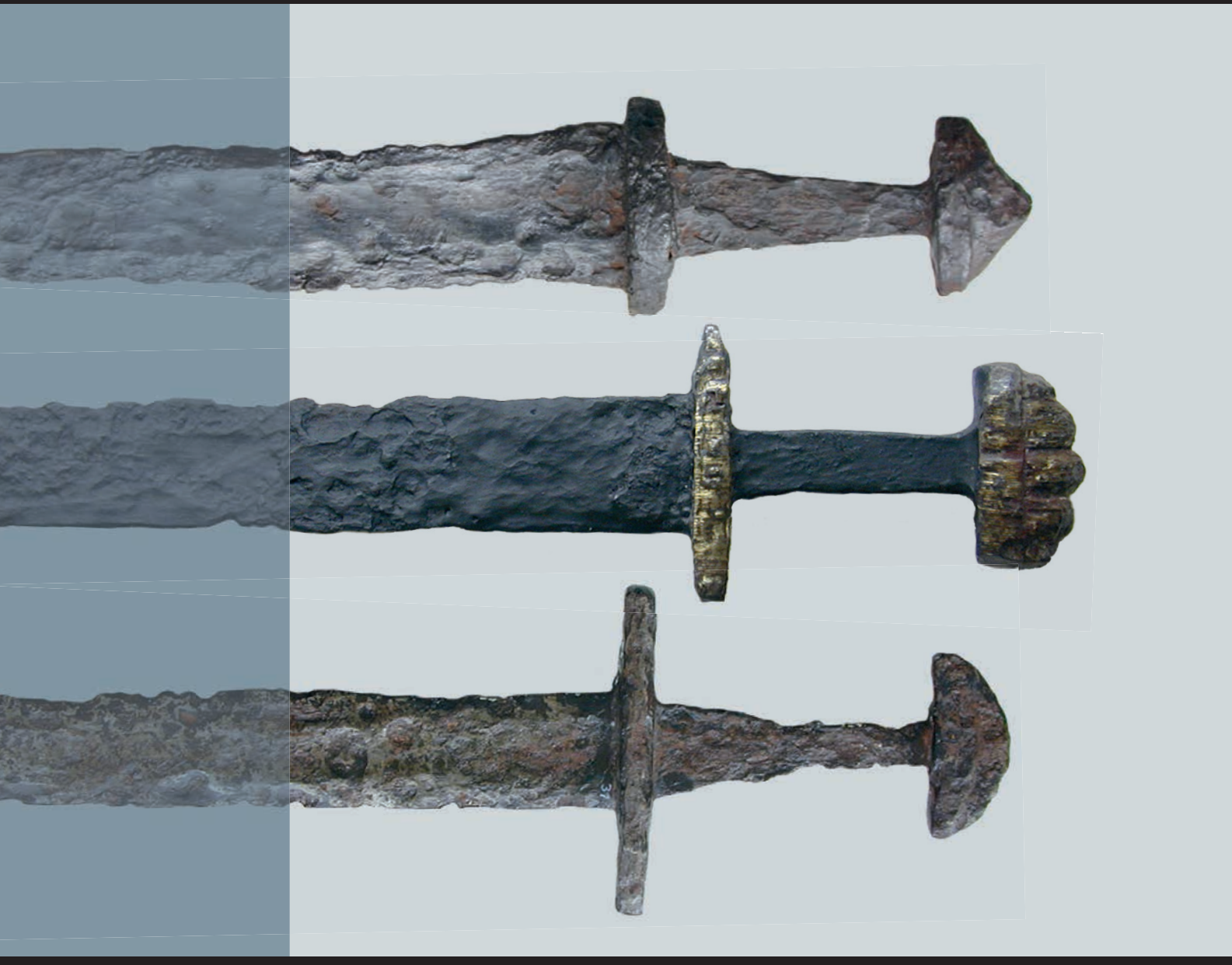
IX

INTERNATIONALE TAGUNGEN IN MIKULČICE



BEWAFFNUNG UND REITERAUSRÜSTUNG DES 8. BIS 10. JAHRHUNDERTS IN MITTELEUROPA

Waffenform und Waffenbeigaben bei den mährischen Slawen und in den Nachbarländern

MORAVIA MAGNA

ARCHÄOLOGISCHES INSTITUT AV ČR BRNO 2019

Lumír Poláček – Pavel Kouřil (Hrsg.)

Bewaffnung und Reiterausrüstung des 8. bis 10. Jahrhunderts in Mitteleuropa

Waffenform und Waffenbeigaben bei den mährischen Slawen und in den Nachbarländern

SPISY ARCHEOLOGICKÉHO ÚSTAVU AV ČR BRNO
50

INTERNATIONALE TAGUNGEN IN MIKULČICE
(ITM)

herausgegeben von

Lumír Poláček

PROJET MORAVIA MAGNA

sous le patronage de

UNION ACADÉMIQUE INTERNATIONALE
BRUXELLES

UNION INTERNATIONALE DES SCIENCES PRÉHISTORIQUES ET PROTOHISTORIQUES
(C.I.P.S.H. - U.N.E.S.C.O)

ARCHEOLOGICKÝ ÚSTAV
AKADEMIE VĚD ČESKÉ REPUBLIKY, BRNO, v. v. i.
BRNO 2019

INTERNATIONALE TAGUNGEN IN MIKULČICE
Band IX

BEWAFFNUNG UND REITERAUSRÜSTUNG DES 8. BIS 10. JAHRHUNDERTS IN MITTELEUROPA

Waffenform und Waffenbeigaben bei den mährischen Slawen und in den Nachbarländern

herausgegeben von
Lumír Poláček – Pavel Kouřil

ARCHÄOLOGISCHES INSTITUT
DER AKADEMIE DER WISSENSCHAFTEN
DER TSCHECHISCHEN REPUBLIK, BRNO, v. v. i.
BRNO 2019

Gedruckt mit Unterstützung des Editionsrates der Akademie der Wissenschaften
der Tschechischen Republik

Begutachtet von

Prof. dr hab. Krzysztof Jaworski und prof. PhDr. Alexander T. Ruttkay, DrSc.

Alle Rechte vorbehalten
Copyright © 2019 by
Archeologický ústav AV ČR, Brno, v. v. i.
ISBN 978-80-86023-59-5
ISSN 1804-1345

Inhalt

Vorwort 7

Miloš Bernart: Kettenhemden und andere Kriegerrüstungen des frühen Mittelalters aus Böhmen, Mähren und der Slowakei 9

Felix Biermann: Reitersporen aus Feldberger Burgen im nordwestslawischen Gebiet 23

Milan Hanuliak: Waffen und Kriegerausrüstung in großmährischen Gräbern auf dem Gebiet der Slowakei 37

Miriam Jakubčinová: Pferdegeschirr und Reitzeug des 9. Jahrhunderts aus dem Gebiet der Slowakei anhand des Materials aus Bojná 51

Ante Jurčević: Funde frühkarolingischer Waffen und Reiterausrüstung aus der Entstehungszeit des kroatischen Fürstentums 67

Bohuslav František Klíma: Kriegergräber im großmährischen Burgwall Znojmo-Hradiště und seinem Hinterland (mit Exkurs von Helena Březinová) 101

Jiří Košta – Jiří Hošek: Schwerter und Schwertfragmente aus dem großmährischen Zentrum in Mikulčice 151

Pavel Kouřil: Frühmittelalterliche bronzene Hakensporen mit nach innen umgeschlagenen Enden aus Mähren 181

Zdeněk Měřínský: Schwertfunde im ostmitteleuropäischen Raum im zeitlichen und sozialen Kontext 201

Elisabeth Nowotny: Waffen und Reitzubehör im Gräberfeld von Thunau, Obere Holzwiese. Neue absolute Daten zu Petersens Typ Y-Schwertern 211

Maja Petrinec: Sporen und Reitzubehör aus der 2. Hälfte des 9. bis 11. Jahrhunderts im kroatischen Raum 233

Lumír Poláček – Petr Luňák: Äxte aus dem slawischen Burgwall von Mikulčice und ihr Fundkontext 245

Naďa Profantová: Neue Funde von Waffen und Reitzeug aus Mittel- und Ostböhmen 263

Philipp Roskoschinski: Waffenausstattung, Waffengebrauch und Kriegswesen der Nordwestslawen vom 10. bis zum 12. Jahrhundert 283

Šimon Ungerman: Die Wadenriemengarnituren im frühmittelalterlichen Mähren 307

Jozef Zábojník: Terminologisch-typologische Spezifika der funktionalen Bestandteile des Pferdegeschirrs aus der Zeit des Awarischen Khaganats 343

András Csuthy: Horse Harness Rattles from the Avar Period 351

Stefan Eichert – Mathias Mehofer: A Carolingian-Period Winged Lance from Lake Längsee in Carinthia/Austria 359

Václav Gřešák – Martina Hřibová – Petr Hlaváček – Luděk Galuška – Ondřej Bílek: Reconstruction of the Riding Saddle Used in Great Moravia in the 8th–9th Centuries 373

David Kalhous: Preconditions of the Genesis of the Přemyslid Realm 385

Piotr N. Kotowicz – Marcin Glinianowicz – Arkadiusz Michalak: Elements of Weaponry from the 9th- and 10th-Century Trepcza Complex near Sanok, South-Eastern Poland 403

Paweł Kucypera: Pattern-Welding Technique in Early Medieval Sword-Making 421

Petr Luňák: Rectangular Embossed Fittings – Possible Armour Parts? 431

Karol Pieta – Zbigniew Robak: The Military Finds from Bojná III and Klátova Nová Ves near Topoľčany, Slovakia 441

Zbigniew Robak: The Age of Migrating Ideas. A Short Contribution on Cruciform Decorations on Great Moravian Strap Fittings in the 9th Century 453

Vorwort

Der vorliegende Band enthält Beiträge, die während der gleichnamigen Internationalen Tagung in Mikulčice im Mai 2011 vorgetragen wurden. Wie schon die voraufgegangenen ITM-Kolloquien so war auch diese Tagung einem ausgewählten aktuellen Aspekt der mitteleuropäischen Frühgeschichtsforschung gewidmet, und zwar dem Thema der Bewaffnung und Reiterausrüstung. Damit wurde ein breites Spektrum von Fragen behandelt, beginnend mit Typologie, Chronologie und Technologie einzelner Sorten von Artefakten über allgemeine Probleme der frühmittelalterlichen Bewaffnung und Reiterausrüstung bis hin zum archäologischen Experiment. Der gegebene Themenkreis wird im Buch nicht nur aus Sicht der Archäologie, sondern auch der historischen Wissenschaft erörtert, und zwar mit einer beträchtlichen Gelehrsamkeit und dem Streben nach einer komplexen oder analytischen Darstellung. Die vorliegenden 25 auf ganz unterschiedlichen Quellenbeständen fußenden, oft innovativen Beiträge von Forschern aus Polen, der Slowakei, Tschechien, Ungarn, Kroatien, Österreich und Deutschland bieten ein kompaktes Bild der Bewaffnung und Reiterausstattung der Westslawen und Teilen der Südslawen, aber auch der Awaren und Ungarn vor dem Hintergrund der gesellschaftlichen, kulturellen und politischen Entwicklung Ostmittelosteuropas in den letzten drei Jahrhunderten des ersten Jahrtausends.

Leider erscheint die Sammelschrift mit beträchtlicher Verspätung, wofür wir die Autoren und Leser gleichermaßen um Entschuldigung bitten. Hauptursache der Verzögerung waren die nach dem tragischen Brand der Arbeitsstätte in Mikulčice 2007 zu bewältigenden Aufgaben: die Errichtung und Inbetriebnahme der neuen archäologischen Basis Mikulčice-Trapíkov und die parallel hierzu gebotenen Sicherungsarbeiten an dem umfangreichen, durch den Brand beschädigten Fundmaterial von der Fundstelle Mikulčice-Valy, das nach und nach konservatorisch behandelt und identifiziert werden musste.

Trotz der Verspätung erlauben wir uns, der wissenschaftlichen Fachwelt diesen Konferenzband zu unterbreiten, in der Überzeugung, dass alle Beiträge ihre Relevanz und Aktualität behalten haben. Mögen sie als nützliches Hilfsmittel und Studienmaterial für weitere Forschungen auf dem betreffenden Fachgebiet dienen! Ergänzt sei, dass die letzten Autorenkorrekturen der meisten Beiträge im Jahre 2016 erfolgten und der Inhalt seither nicht mehr aktualisiert wurde.

Es ist uns eine angenehme Pflicht, uns bei allen Autoren der in der Sammelschrift präsentierten Beiträge sowie bei dem Kollektiv der Mitarbeiter, die sich an der Vorbereitung dieses Bandes beteiligten, recht herzlich zu bedanken. Für Übersetzungen und sprachliche Korrekturen sind wir Frau Pavla Seitlová und Frau Tereza Bartošková und sowie den Herren Torsten Kempke und Paul Maddocks verbunden. Für Redaktionsarbeiten gebührt unser Dank Herrn Petr Luňák und Frau Zdeňka Pavková, die auch den Satz des Buches übernahm.

Das Buch erscheint in einem Jahr, in dem das Archäologische Institut der Akademie der Wissenschaften der Tschechischen Republik des 100. Gründungstags seines Vorgängers, des Staatlichen Archäologischen Instituts, gedenkt, der ersten professionellen archäologisch-wissenschaftlichen Arbeitsstätte in der damals eben erst gegründeten Tschechoslowakei.

Erscheinen konnte die Publikation dank der finanziellen Förderung seitens des Editionsrats der Akademie der Wissenschaften der Tschechischen Republik, dem dafür unser Dank gilt.

Lumír Poláček – Pavel Kouřil

Lumír Poláček – Pavel Kouřil (Hrsg.), Bewaffnung und Reiterausrüstung des 8. bis 10. Jahrhunderts in Mitteleuropa
Internationale Tagungen in Mikulčice IX, Brno 2019, 385–401

Preconditions of the Genesis of the Přemyslid Realm

David Kalhous

Preconditions of the Genesis of the Přemyslid Realm. *In the following study we analyse the validity of the now generally-accepted view of the beginnings of the Přemyslid realm. Those who established this viewpoint emphasise the income from selling slaves (and distance trade in general) as the main source the dynasties in Central Europe used to strengthen their economic power, which, in the next stage, enabled them to build powerful cavalry armies as their "iron fist". With these armies they were supposed to have built their "states". In this article, not only is the automatism of this mechanism brought into question (the prevalence of the cavalry), but also the idea that a state can be built with an army. The author, on the one hand, points out the predatory character of such a system, and on the other hand draws attention to the building of hillforts as a mechanism that not only enhanced the protection of a given area, but also, due to the need for construction and repairs, brought large groups of people together, and thus formed a common identity for them.*

Keywords: early states – Central Europe – Early Middle Ages – history of power – history of violence

The struggles for the boundaries of the realm of the Přemyslids in the 10th century and the chronology of its genesis and fall have received considerable attention in the historiographies of Central Europe (recently Matla-Kozłowska 2008), although the sources that might enable a reconstruction of power relationships in the regions of present-day Central and Eastern Europe are scanty. Still, numerous hypotheses have been proposed concerning the development of the early Přemyslid Duchy. The ideas formulated by František Graus (1965a) and taken further by his followers from the next generations – Dušan Třeštík, Jiří Sláma and Josef Žemlička – have had the most significant influence and interpretative ambitions. On the following pages we will examine this concept from the perspective of source criticism and logistical and social limits as well.

František Graus (1965b) puts forward the idea of four stages in the development of the retinue from a small private troop to a feudalised "extended state retinue", numbering thousands of warriors. He connects the third stage of the retinue's "development" with the genesis of the state and describes it as an "extended state retinue", entirely dependent on the ruler and utterly loyal to him (Graus 1965b, 4–5). According to Graus (1966a, 145), rulers destroyed the old social structures with the aid of this "retinue army", from which a new elite was recruited. At the same time, allegedly, the smaller retinues of the old type disappeared. Their sporadic existence Graus (1965b, 11) did not exclude, but they did not play any significant role in his view. The retinue first gained its livelihood from loot, then from the ruler's treasury and finally from allocated land. In this last stage of development, because of the need for establishing a territorial system, the retinue settled on the land, becoming feudalised. Thus, relationships between the members of the retinue and the ruler weakened, until the retinue dissolved (ibid., 5, 15–17). Graus (1966a, 139–145; differently Łowmiański 1970, 113–115), owing to a shift in terminology and the alleged discontinuity of hillforts, also acknowledges the existence of a deep divide between 9th- and 11th century society, even accepting a prince's theoretical right to ownership of the whole country as well as the right to assign offices. However, he simultaneously acknowledges the existence of allodial estates of the aristocracy (ibid., 138–139) and ascribes considerable power to

the magnate class as early as in the 11th century (ibid., 139–143, 145–152).

Graus's idea is elaborated on by Dušan Třeštík, who is convinced that he has discovered the source from which the Slavic dukes paid these troops: the slave trade (recently Třeštík 2001, 125–128). Třeštík (2001, 126) even attempts to calculate the costs and, considering the amount of slaves sold in Cordoba, he thought it probable the army's weapons and armour were paid for out of the profit from the slave trade and from loot. According to him (Třeštík 2001, 125–127), these mounted warriors, in contrast to Western Europe, were not enfeoffed with land, but were supported directly by the duke.[1] Třeštík (1997, 389–392, 435–440), inspired by Karl Leyser (1982; criticised by Bachrach/Bachrach 2007), also looks for analogies in Saxony, where, allegedly, a reform of Henry I the Fowler (919–936) also led to the formation of a large equestrian army. However, the Přemyslids (and later the Piasts and Arpads), as Třeštík (1987, 38–41) puts it, directly followed the model of Great Moravia, whose rulers had supposedly managed to create large cavalry units as well. Třeštík (ibid., 38–41) alleges that – while the Bohemian princes as a whole succumbed to the Přemyslids – the Great Moravian elites managed to maintain their autonomy. Therefore, the medieval Bohemian aristocracy was not a direct successor of 9th-century elites, but instead originated from the courtiers and servants of the Přemyslid dynasty, who, as early as at the turn of the 12th century, had begun to build their own base: the external manifestation of this phenomenon may be seen in an alleged "internal colonisation of the country" (Třeštík 1971, 555–561).

Fortified settlements also played a significant role in the abovementioned theory. Approximately twenty years ago, on the basis of an analysis of archaeological sources in combination with some written accounts, brilliant archaeologist Jiří Sláma (1987; 1988) identified the initial power base of the Přemyslids as the area demarcated by the Libušín, Budeč, Mělník, Stará Boleslav, Levý Hradec, Tetín and Lštění boundary forts, built swiftly one after another at regular intervals, to protect the access roads to Prague. Furthermore, Sláma also proposes consideration of the possibility of a shift of ducal policy with the reign of Boleslav I (935–972). As Sláma puts it, Boleslav, in contrast to his older brother Wenceslas, did not mean to content himself with a formal upper hand over the other Bohemian dukes and decided directly to subjugate the whole of Bohemia. So he conquered, as Sláma (1986, 59–60; 1988, 80–84) writes, the castles of his opponents, destroyed those castles and built new ones in their vicinity for his people.

In order to be able to discuss the concepts that are now relevant for interpretation of the early medieval history of Bohemia we will first focus on the importance of castles to early medieval realms and also on their connection with princes. Secondly, we need to clarify the definition of the retinue, which plays a significant role in many discourses of the early medieval realm. Thirdly, we need to view the evidence for these retinues in early medieval realms and their logistical limitations as well. Fourthly, it is necessary to consider the objection against the evidence for large Přemyslid (or Piast) retinues in early medieval sources.

Naturally, no one can doubt the importance of monuments at the beginning of more complex societies. A few years ago anthropologists and archaeologists put forward the useful concept of "materialisation of ideology", which would have partially solved the question of the role of fortified settlements in the formation of power structures (DeMarrais/Castillo/Earle 1996). These researchers reckon with the existence of elites who, at a given point of social development, are forced to demonstrate their power by means of a certain type of material culture. Certainly, such efforts might be manifested in the building of fortified settlements, landscape monuments. The constant need for repairs documented in many early medieval charters meant a periodical amount of work being undertaken by neighbouring communities; for the so-called *trimoda necessitas*, first appearing in Anglo-Saxon immunity charters at the end of the 8th century, which included not only the obligation of military service, but also the duty to participate in the construction of fortifications and, potentially, in the repair of bridges, see Hollister 1962; Dempsey 1982, and for the Czech lands see e.g. CDB I, No. 79, 83. Through these duties, power was regularly demonstrated on the periphery, symbols of the ability to control the surrounding area and to make the local inhabitants participate in construction. This, indeed, implies the existence of structures of power in a given area before the emergence of the state and does not rule out the possibility of the self-organisation of the communities which built those settlements, so that a strong central power might have been unnecessary in terms of the organisation of their construction.[2]

1 Třeštík was inspired e.g. by Timothy Reuter. But Reuter (1985, 82–84) also mentions that Carolingian and Ottonian vassals did not hold any fiefs and were sustained by their lords. The thesis of the Carolingian fiefs is problematic: more recent literature doubts their common existence, see Reynolds (1994; Wolfram 1994; Kasten 2009).

2 The earthworks of these hillforts consisted of wooden constructions filled in with earth and covered on the external side with a stonewall (Procházka 2009). There is one Great Moravian hillfort, Pohansko, where excavations have been being carried out since the 1960s and also continually published.

Castles were also acknowledged as a centre of power by the 12th-century historian, Cosmas of Prague. This is the reason he connected with them not only the contemporaneous Přemyslid princes, but also the mythical dukes from ancient times.[3] Furthermore, Cosmas (Bretholz 1923, 2.19, 111) puts an interesting speech into the mouth of the magnate Mstiš, the keeper of a ducal castle, who mentions in the speech that the castle belongs to the duke, who can manage it at will. This would suggest that at least some castles had close relationships to the duke. Therefore, castles would not only have been residences of the "representatives" of the ruler's power, but also symbols of this power in the landscape. However, the evidence we have does not extend beyond the 12th century; also, the relationship between ducal castles, estates and villages is the subject of discussion (see at least Jan 2006; Třeštík/Žemlička 2007; for Poland Modzełewski 1973). Thus, assessment of the functions of fortified settlements and their links to particular social and political circumstances requires a considerable wealth of data, such as we have from the Anglo-Saxon milieu for Mercia in the 8th century, or for the realm of Alfred the Great in Wessex in the second third of the 9th century (Bassett 2007; Haslam 2005; about the Burghal Hidage see at least Hill 1969), or from Poland (e.g. Kara 2000), but not from 10th-century Bohemia. With revision of the older excavations, the concept of the early Přemyslid domain starts to seem flawed.

The question of what kind of group can be regarded as a retinue is also essential for the "Central European model". The concept of the retinue already played a relatively significant role in the interpretation of Germanic society in the works of Germanists of the 19th century. Within the framework of this concept, the retinue was characterised as a group of freemen who were connected to their leader by means of specific "Germanic fidelity" (cf. Schlesinger 1953; earlier Roth 1850, 18–22). In a number of regards, the assumption of "fidelity"- *Treue* – is shattered by Graus, who points out a compulsory element within the retinue and rejects the existence of a specific type of "Germanic fidelity" (Graus 1959 and 1966b; Kuhn 1956). He himself, however, does not propose any constructive definition of the notion of "retinue" (Graus 1965b). On the contrary, his concept of "retinue army" indicates that he employs this term for any relatively stable group of warriors, without thinking about the relationships due to which the group was able to exist, or how the characteristics of these ties changed in connection with the increasing number of members of these "retinues". Indeed, such a broadly and, what is more, inexplicitly defined notion is not very useful. Moreover, Graus's polemic is rather close to the idea of the specific "Germanic fidelity". When it deals with the general notion of fidelity, it loses its force (cf. Luhmann 1979). For instance, Graus draws attention to numerous cases of treason in various early medieval texts, but he does not pose the question as to why these texts condemned it. The only explanation might be that, in their understanding, "fidelity" played a key role in the co-existence of a certain community as, indeed, a sought-after ideal rather than as the real state of affairs. Henryk Łowmiański's attempt (1970, 150–192, 165–166 ff) seems to be more useful, but still remains too vague, because modern armies also fit into his definition.

Although a compulsory element certainly played a significant role within the retinues, the ruler's retinue

Because of that, we can use the results of these complex analyses without danger as a useful case study (Dresler 2011). According to petrographical analysis, the stones were transported to Pohansko from a distance of 12 km (ibid., 82–83). The construction of Pohansko also required c. 7,400 m^3 of wood that was cut mostly near waterways (ibid., 83, 85–86). The volume of earth is estimated at 69,000 tons (ibid., 84). These materials could have been transported by cart (500–750 kg), or on primitive boats (200–1,000 kg) (ibid., 84; cf. Bachrach 2010, 51–53). To move the stone using 10 boats with a cargo capacity of 1,000 kg – which would have needed one day for a single journey – would have taken between 5 and 8 years (Dresler 2011, 92–93; Bachrach 2010, 59). We do not know exactly how many boats were used; however, our data does not exclude the possibility that in Pohansko the builders could have transported the materials with twice as many boats (Dresler 2011, 92–93). The daily norm for mining stone is estimated at 1 m^3, for processing earth 2.5 m^3 and for cutting wood 0.19 m^3 and for its shaping 2.5 m^3 (cf. Dresler 2011, 125; Procházka 2009, 272–273; Haslam 2005, 121–154, 132; Abels 1998, 206), but the employment of skilled bricklayers could have sped up the construction substantially – the bricklayer Vratislav Kunte built a stone wall, width 1 m, average height 1.55 m and length 100 m, in Maková Hora in 50 working days, although by the application of our norms, the construction would have taken 155 days (Dresler 2011, 126; Dreslerová 2006, 341–348). We also know that one worker was able to dig a hole for 6 columns in one day, and for the whole hillfort in 35 days (Dresler 2011, 126). This implies that 150 workers would have managed to build the fortification within 4 or 5 months; the same result is valid for Mikulčice, another important Great Moravian hillfort (Procházka 2009, 273). In large hillforts such as Mikulčice or Pohansko, hundreds of people lived at the same time and, in the hinterland, people grew wheat to supply the centre (Dresler/Macháček 2008). To mobilise 150 workers for one season would not have placed extreme demands on Great Moravian princes. The same result is valid for Wessex in the 9th century (Haslam 2005, 132–133) and for Přemyslid Bohemia as well.

3 Cf. Cosmas; Bretholz 1923, 1.19, 38–40; chap Kalhous 2011. See also Pferschy 1989, 289–293; and also Squatriti 2002; on the example of the Bulgarians Squatriti 2005, esp. 81–90. About hillfort building see the useful monograph by Jäschke 1975. On the relationship between the castle and its suburbium in Carolingian Europe, in the narrower as well as broader sense, see Kalhous 2008.

was also the milieu where young members of the elites established important contacts and, at the same time, represented the environment they came from (Vaníček 1988, 67–69; Adamus 1958, 48–58). Certainly, by means of anthropological and sociological enquiries, it would be necessary to answer the question of whether it is likely that new members were fundamentally transformed from representatives of their families into blindly obedient instruments of the duke, which would enable him to murder their relatives and completely alter the social order, and, in particular, were kept as the ruler's "weapons" for a longer period of time (Adamus 1958, 48–58). The ties established because of the concentration of elites in a particular place as well as the advantages for the organiser of their meetings were, beyond any doubt, more important (see also Łowmiański 1970, 115–121, 175–176). The same holds true for the idea of close relationships between the Duke and members of the retinue who were sent to individual castles (England provides an example of the downside of this, see Hollister 1977).

Although the existence of steady cores of the army formed by the ruler's retinue and retinues of individual headmen cannot be rejected, it follows from the aforementioned restrictions – as necessitated by the definition of the term, logistics and other elements – that those armies of many thousands could not have been retinues or even blindly obedient instruments of the Duke's regime. This is closely related to the issue of the characteristics of leaders of retinues, institutionalised armies or, more generally, various types of authority (Weber 1958, Vol. 1, 122–176; ibid., Vol. 2, 603–612, 679–778). Particularly in an age of limited possibilities of communication and, by extension, supervision, it was simply impracticable.

Apart from quite essential theoretical questions connected with the definition of the entire research field, a number of unexpressed assumptions have formed the basis of the whole concept. Graus and his successors, without much reasoning, base their theories on the idea of the total predominance of a professional mounted army over an army of free infantrymen (Choc 1967). Also indirectly, he accepts the hypothesis of a similar revolutionary change that allegedly took place in the Frankish Empire at the beginning of the 8th century and led to a similar transformation of Frankish social structure and characteristics of warfare. Nevertheless, these premises, silently accepted, are worth discussing as well.

In the first place, the size of early medieval armies is a matter of fierce discussion. A seemingly brilliant source of information appears to be the so-called *Indiculus loricatorum* (Weiland 1893, 633; cf. Auer 1971) of 981, where the alleged sizes of equestrian troops sent to Italy in support of King Otto II are mentioned. However, interpretation of this text is problematic as well. Individual troops amount to dozens of men, but the total sum of horsemen is approximately 2,100. When regarding these troops as mere reinforcements, the total number of horsemen who might have been assembled from the Empire would have been much higher.

That is why Karl F. Werner (1968, 813–832; cf. Bachrach 2000) uses another criterion for his estimation of the size of early medieval armies, namely the number of administration units of the Carolingian Empire. Because around 700 counties were known in his time and because he assumed the average county could mount at least 50 equestrians, Werner (1968, 813–832) calculates a total of 30,000 equestrians. In his opinion, the real number never exceeded approximately 10,000 men.

Making use of Anglo-Saxon evidence Bernhard Bachrach (1989, 78–82; cf. also Wormald 1982, 152–153) draws attention to the statute which claimed that one metre of ramparts must be defended by one man. He also proceeds from the length of the ramparts of individual north French civitates as given by Carlrichard Brühl (1975; cf. Porsche 2001). On the basis of this data, he proposes the minimum size of their garrisons and the number of warriors needed for an effective siege (Bachrach 1989, 78–80; Bachrach 1985b, 4–9). In estimating the total size of Angevin forces, he bases his calculations on the number of castles in their domain and on the premise that each of these strongholds had a garrison of 30–40 men (Bachrach 1989, 82–84). He reaches the conclusion that, altogether, the Angevin forces amounted to 2–3,000 professional soldiers (Bachrach 1989, 81–82).

The account by Widukind of Corvey can serve as a guideline for solving the question of the size of early medieval armies in a different way. As mentioned above, Widukind (Hirsch/Lohmann 1935, I.36, 53) refers to 50 equestrians who decided a battle with their attack. In his chronicle, he also describes the death of 50 warriors at the hands of the Slavs (ibid., 3.45, 126). The fact itself that Widukind deals with this defeat reflects the importance of the loss of such a number of soldiers in the milieu from which he came. Also, when describing the conflict between Otto I and the Frankish rebel Eberhard, he draws attention to 100 equestrians in the King's army (ibid., 2.17, 82). Back in the Carolingian period, the image is similar (Dümmler 1895, No. 20, 528; cf. Pohl 1988, 12–16). Besides the aforementioned accounts regarding only the loss of a few warriors, the *Lex Inne* (Eckhardt 1985, §13.1, 143) and some other barbarian legal codes also regard groups of dozens of warriors as armies. These conclusions are also confirmed by archaeological and anthropological evidence.

Statistics of the various types of injuries to over 30,000 buried individuals from early medieval Central Europe show that, in the majority of these, no connection with combat can be proven. Therefore, one must conclude that, despite the statements of epics, chronicles, annals and also some modern historians, the Early Middle Ages was a period of restrained violence and the size of contemporaneous armies did not exceed dozens or hundreds of men (Krejsová/Vachůt/Hejhal 2008).

As far as the size of non-stationary early medieval armies is concerned, moderate estimates seem more likely – not just owing to logistical problems with supplies for the allegedly large armies. Werner and Bachrach's observations – if one accepts them – and also the fact that, in the Middle Ages, the regions of contemporary France, Germany and the United Kingdom were populated as densely as 10th-century Bohemia – would make it possible to think of a relatively great size for the Přemyslid armies – already Choc (1967, 66–67), on the grounds of his analysis of the *Indiculus*, estimated the Přemyslid forces at 4,000–5,000 armoured horsemen, 3,000–4,000 members of light cavalry and approximately 8,000–13,000 infantry freemen. It would, however, mean that their opponents in the East might have had armies of a comparable size, too. Even if assuming the existence of such large field armies in the Early Middle Ages, this arguable size of Boleslav's army does not account for the success of his expansion, in other words, the establishment of the "realm".

When considering the hypothesis of a large mounted army on the grounds of the given premises, one is confronted with the problem of the extent of the inhabited area in 10th-century Bohemia. Besides partial yet relatively detailed probes,[4] only the 40-year-old work by Jiří Sláma (1967) is available today. The area of Bohemia equals 52,000 km^2. In the Early Middle Ages, however, the majority of this surface was covered with forests, while roughly one third was inhabited. Only a part of this third was actually intensively used (Boháč 1987, 59–87). At the same time, it has been surmised that only the core area around present-day Prague, surrounded by several strategically situated settlements, was the power base of the Přemyslids (Sláma 1987, 1988). It occupied a fifth of the whole area of Bohemia. Even if as much as a half of it was used for agriculture, the size of the potential pastures did not exceed 5,000 km^2, i.e. 500,000 hectares. Based on the methods of Lindner (1981, 14–16), this area was able to feed approximately 50,000 horses, provided, however, that only horses grazed there. If only half of that was destined for horses, the number of horses amounts to 25,000, which corresponds to c.2,500 mounted warriors (ibid., 14–16; cf. also Pohl 1988, Khazanov 1994, 30).

A challenging task is estimating the size of the population. Zdeněk Boháč (1987; 1983, 56–61) and Josef Žemlička, two Czech specialists in the history of settlement, propose two more or less extreme solutions. To be precise, in Žemlička's opinion, 20,000 people lived in the region of Prague and no more than 7,500 persons in the fertile surroundings of Litoměřice, while numerous other significant settlement areas were inhabited to a limited extent only (Žemlička 1980, 174–176). It follows that, with such limitations on the total number of inhabitants of the Bohemian area in the 10th century, one could speak of 100,000 persons at most, which would mean that, in the course of one century, the population of Bohemia increased four times. Zdeněk Boháč (1987) estimates the number of inhabitants in Bohemia around the year 1050, i.e. one hundred years later, at 400,000 and presumes that the majority lived in the inner settlement area. Thus all solutions indirectly show to what extent the premises which one applies can determine the results of an analysis. This impression is confirmed by the historiography of the High and Late Middle Ages.[5] The same is true of attempts to estimate the number of farming households needed for supporting one member of the elite. On one hand, Zdeněk Smetánka (2004, 38–39) discovered, on the basis of a charter to the Canons of Únětice of 1130 – who can hardly be regarded as representatives of the highest social stratum – that roughly 2–3 peasant families were able to support one family which did not take part in agriculture. Also Šmelhaus (1980, 46) estimates

4 The most important works are Bubeník 1988; Klápště 1994, 2005; Velímský 1998. See also Zápotocký 1965, 1977; Boháč 1978; Žemlička 1974, 1980.

5 Cf. Jaroslav Mezník's (1998, 57) estimates for Moravia, occupying half of the area of Bohemia, of 2,500 to 3,000 villages not before the middle of the 14th century. Also František Šmahel (1993, 191–192), when considering the potential density and size of the population in the Czech lands (Bohemia, Moravia and in the past also Silesia), is pronouncedly sceptical as to the high estimates and supposes that approximately 2,000,000 inhabitants lived in Bohemia, Moravia and Silesia at the beginning of the 15th century, with a density of 18 persons per km^2. In this case, Bohemia would have been inhabited by approximately 1,000,000 people at that time. In his scepticism, Šmahel proceeded particularly from the evidence from rich Italy, where the land register of Florence of 1,427 makes it possible to estimate the average population density at only 24 inhabitants per km^2. This Italian analogy, however, has its weak points – it is not clear to what extent the settlement structure of the region might have been influenced by the existence of an enticing urban centre. Duby's findings, who on the grounds of Carolingian polyptychs assumes the population density in settlement areas at 25 to 40 inhabitants per km^2, urges caution; see Duby (1973, 92–93), who also points out that rather small settlement regions were separated by quite uninhabited areas.

the possessions of the Vyšehrad Chapter (17 canons) at 100–110 landed estates. On the other hand, Krzemieńska and Třeštík (1979, 206, n. 4) estimate, on the basis of a study by Raoul van Caenegem (1963, 425), that one monk was supported by at least 30 peasants. Indeed, several thousand horsemen might have been recruited from them under conditions of Přemyslid rule over the whole of Bohemia. However, it is a vicious circle, and the fact that the sizeable pastures necessary for thousands of horses have been neglected in the model presented here does not make the situation any easier.

The existence of a system where garrisons of towns and castles consisted of a small stable troop, as well as of units from the surroundings allocated to a certain section of the ramparts which interconnected a castle and its surroundings, is implied in the chronicle of Gallus Anonymus (Maleczyński 1952, I.8, 25–26[6]; ibid. 1.20, 46 about *greagarii milites*; cf. Barański 1994, 91–99) as well, which mentions large troops allocated to Poznań, Gniezno, Giecz and other castles. Also Thietmar of Merseburg (Holtzmann 1935, 5.9, 231–232; cf. Schlesinger 1961, 165–176) highlights warriors settled in the suburbs of Meissen. Otto I's charter of 23rd April 961 (Sickel 1879/84, No. 222, 306[7]; cf. Kalhous 2008) mentions Slavs who are allowed to take shelter behind the ramparts of Magdeburg and other castles in return for paying the tithe. In this case, too, it seems likely that those Slavs served as reinforcements for the castle defenders, although there is no clear evidence in this regard. Also the reform, as Widukind (Hirsch/Lohmann 1935, 1.35, 48–49[8]) puts it, introduced by Henry I the Fowler, took the same direction – every eighth man was obliged to serve at a castle. Similarly, in Anglo-Saxon England, besides mercenaries (Hollister 1962, 16–24), there were, on the one hand, warriors for whom war was a way of life and who participated in all military campaigns as the so-called select fyrd, and, on the other hand, the general fyrd called to arms only in order to defend given areas, for instance, castles (Hollister 1962, 27–31). The select fyrd consisted of warriors who were called up depending on the size of the cultivated land – one man per five hides (land tax units) (Hollister 1962, 24–27, 38–58; Hollister 1961, 61–74; about the hide McGovern 1972). Thus, the size and composition of armies differed essentially according to a given situation. Nevertheless, experts on Anglo-Saxon England claim that an essential role, maybe even the main role of the "army's backbone", was played by the retinues of lords and the ruler (Abels 1988, 161–171, 173–175, 179–185; Hooper 1992). This system did not differ much from the Carolingian one. Capitularies also required a certain number of warriors per *mansus* to be called up, depending on the extent to which a given area was being menaced (Boretius 1883, No. 48, 134–135). Alongside these warriors, the Carolingians (and rulers of individual duchies established after the fall of the Carolingian Empire) had retinues of bishops, abbots and secular magnates at their disposal (Boretius 1883, No. 75, 168; Waitz 1841, 89; cf. Prinz 1971). The Ottonian army, too, consisted of retinues of the king and magnates, or freemen. According to Leyser (1982, 25–33), to whom Třeštík refers, the significance of Henry I's reforms lay rather in a more intense training than in the formation of a large ruler's retinue. We can also conclude that early medieval armies were hardly uniform organisations and can only partially be seen as tool of social control in the hands of a central power. There is, however, no serious doubt that armoured equestrians and infantry

6 *De Poznan namque mille CCCo loricati milites cum IIIor milibus clipeatorum militum; de Gneznen mille quingenti loricati et quinque milia clipeatorum; de Wladislau castro octigenti loricati et duo milia clipeatorum; de Gdech CCCo loricati et duo milia clipeatorum. Hii omnes fortissimi et ad bella doctissimi magni Bolezlaui tempore procedebant. De aliis vero civitatibus et castellis et nobis longus et infinitus labor est enarrare et vobis forsitan fastidiosum fuerit audire …Plures namque habebat rex Bolezlaus milites loricatos, quam habet nostro tempore tota Polonia clipeatos; tempore Bolezlaui totidem in Polonia fere milites habebantur, quot homines cuiusque generis nostro tempore continentur.*

7 *…ad sanctum Mauricium in Magadaburg donavimus atque tradidimus decimam quam Sclavani ad eandem urbem Magadaburg pertinentes, nec non et etiam omnium Sclavanorum decimam ad civitatem Frasa pertinentium, insuper etiam et illam decimam quam Sclavani persolvere debent ad Barborgi civitatem pertinentes, similiter etiam et omnem decimam Sclavanorum ad civitatem quę dicitur Cauo pertientium ex integro donamus atque tradidimus ad sanctum Mauricium in Magadaburg. Hoc instantissime iubemus ut omnes Sclavani ad predictas civitates confugium facere debent, annis singulis omnem addecimacionem eorum plenissime ad sanctum Mauricium persolvant.*

8 *Igitur Heinricus rex, accepta pace ab Ungariis ad novem annos, quanta prudentia vigilaverit in munienda patria et in expugnando barbaras nationes supra nostram est virtutem edicere, licet omnimodis non oporteat taceri. Et primum quidem ex agrariis militibus nonum quemqe eligens in urbibus habitare fecit, ut ceteris confamiliaribus suis octo habitacula extrueret, frugum omnium tertiam partem exciperet servaretque. Ceteri vero seminarent et meterent fugesque colligerent non et suis eas locis reconderent. Concilia et omnes conventus in urbibus voluit celebrari; in quibus extruendis die noctuque operam dabant, quatinus in pace discerent, quid contra hostes necessitate facere debuissent.* Springer (1994, 138–145), who points out that, in this context, the *agrarii* must be regarded as opposites of the *urbani*, that is, not simply as warriors-peasants, cf. Leyser 1982; Bachrach/Bachrach 2007.

freemen also differed socially (Leyser 1982, 16–25, 39–42).

It is the distinction between the armies called up to defend their country and attack-oriented troops that might account for contradictory pieces of information concerning the size of medieval armies. While economic conditions made it possible to call to arms numerous men in the event of an emergency for a short period of time, it was difficult to provide them with provisions in a particular place: for this reason, Anglo-Saxon measures required, for instance, participation in defence only if the warriors could return home the same evening (Hollister 1962, 27–31). At the same time, it was necessary to occupy major strategic points, i.e. castles, which needed a considerable number of warriors for their defence, who did not always end up taking part in combat. Besides these forces, there was the select army, much more mobile and consisting of men trained in arms. These armies were made up of the King's retinue, significant magnates and, probably, also select warriors from the general militia. It is likely that these well-trained men formed the cores of the garrisons (garrisons mentioned by *Vita Corbiniani*, Krusch 1913, Chapter 23, 214). Thus, despite amounting to thousands all over the country, the number which could actually be employed in a particular campaign or battle depended on the given circumstances, mainly of a logistical nature.

There is also the question as to where the Přemyslids gained the means for arming such a large retinue. Concerning the price of a horseman's equipment (cf. Boretius 1883, No. 75, 168; ibid., Chapter 9, 171), the information from the Carolingian *Lex Ribvaria* legal code is essential (Beyerle/Buchner 1954, §40 (36).11, 94[9]; cf. Buchner 1953; Henning 1982, 35–68). According to this source, the price of a horseman's equipment would have been around 25 *solidi*.[10] So the equipment of 3,000 equestrians would have cost approximately 75,000 *solidi*. Correspondingly, when proceeding from Třeštík's (2001, 125–128) information on the price of a coat of silver armour amounting to 1,950–3,250 *denarii* of 1.3 g, the total sum is 3.5–7.5 t in silver. It is not likely that, as Třeštík (2001, 126; about the slave trade in the Carolingian empire cf. McCormick 2002) claims, those funds might have been gained from the slave trade. According to his estimates, the profits equalled the given sum, but only after 50 years. This calculation apparently disagrees with Třeštík's idea (2001, 103) of the speed of Boleslav's expansion, its forceful characteristics and, by extension, the immediate need to establish a large and properly armed "state" retinue, in the sense of Graus's idea (1965b, 5).

Timothy Reuter, on whose work Třeštík partly bases his reasoning, considers that tributes played the key role in the subsistence of Frankish warriors. However, he thus implicitly proceeds from the quite absurd idea of the ability of barbarian populations in the East to survive plunder by numerous Frankish retinues (and also by their own elites). At the same time, he denies the local Frankish population the same ability. The hypothesis proposed by him would inevitably mean permanent famine to the east of the Elbe.

What is more, another question emerges: how was it possible to rule effectively with such a limited ducal apparatus over such a considerable population? How was it possible, from a purely military perspective, to conquer neighbours with similar capabilities for keeping large armies? And, above all, how was it possible to control them in the long-term? Regarding subsistence, Třeštík's idea of the genesis of a "Central European state" (and Reuters' hypothesis about the Carolingian expansion as well) are probably untenable. The data gathered also undermines the idea of such state organisation in the 11th and 12th centuries. A more probable scenario is that the expeditions of expanding "realms" gave its elites the chance to strengthen their self-confidence and identity through intensified communication and common action. Latterly this common feeling could have been shattered because of fighting between the members of the Carolingian dynasty and because of battles lost against external enemies. However, the much smaller Přemyslid duchy survived its decline.

The question remains about the general significance of the infantry in early medieval warfare. Paradoxically, it is a problem which Czech (and, in many regards, even general) historiography has not analysed in detail (for logistical restrictions cf. Bachrach 1985a; Gillmor 1986). It is probably unnecessary to emphasise its extremely limited importance regarding the siege of castles (Bachrach 1989). For Třeštík (1997, 435–438), however, the conquest of strongholds played a crucial role in Boleslav's strategy. In his opinion, St Wenceslas (†935) contented himself with the general acceptance of his overlordship, while Boleslav (935–972) conquered his opponents, destroyed their castles and erected new ones nearby.

The idea of the maximum effectiveness of the armoured cavalry cannot be reckoned with, even when considering the classic battlefield (for the genesis of the

9 *Equem videntem et sanam pro septem solid. tribuat. Equam videntem et sanam pro tres solidos tribuat. Spatam cum scogilo pro septem solid. tribuat. Brunia bona pro duodecum solid. tribuat. Helmo condericto pro sex solid. tribuat. Scuto cum lancia pro duos solid. tribuat.*

10 *For estimating this value compare ibid., §40 (36). 11, 94: Vaccam cornutam videntem et sanam pro uno solido tribuat.*

classic type of knightly combat (Flori 1988).[11] Pieces of evidence proving its maximum effectiveness are scarce and their interpretation, as shown below, is not devoid of problems (enthusiastic comments in Dostálová 1996, 396–397). Allegedly, an account by Andrew of Fleury (11th century) belongs here. In his Miracles of St Benedict (de Certain 1858, II.4, 196–197), he describes an encounter of a large army assembled by Archbishop Aimon of Bourges for the purpose of facilitating a truce with God.[12] The defeat of Aimon's army is explained as proof of the superiority of the knights over untrained unmounted freemen (e.g. Bartlett 1994), until Andrew's evidence of the battle was analysed in detail and placed into the context of his whole work (Head 1992). A comparison of Aimon's depiction with the account of the author of the *Chronicon Dolense* (Delisle 1882, 387–388), who describes the battle as a confrontation between two armies of similar strength, shows that Andrew stylised his narration in the sense of a punishment for the violence which the participants in the campaign had committed against their opponents in previous combats.[13] The description of the battle scheme refers rather to a perverse world order, returning to a proper state with God's help, than to the real course of the battle (Head 1992, 226–235). So the battle cannot be regarded as proof of the superiority of an army of knights.

From our point of view it is important to look again at the battle described by Widukind of Corvey (Hirsch/Lohmann 1935, 1.36, 53). According to him, it was the cavalry that commenced the combat. Nonetheless, it was easily forced back by the Slavic infantry; so it returned to the rest of the army with strategic information. Subsequently the infantry took part in the battle, allegedly with great casualties. Finally a group of 50 equestrians attacked again and disrupted the battle formation of the Slavs (ibid., Hirsch/Lohmann 1935, 1.36, 53). Thus the cavalry played an essential role in the battle, but rather as a tactical means of an abrupt attack on an exhausted enemy, than as an omnipotent instrument of victory.

Also a century later, at the Battle of Hastings in 1066, which is considered another significant proof of the superiority of armoured cavalry, William's victory was determined, to a large extent, by tactical advantage and trickery, not by the attack of the cavalry. It is also not appropriate to speak of the superiority of equestrian professionals over infantry "recruits", since the core of both armies is likely to have consisted of trained warriors.[14]

The aforementioned evidence shows that, even though the mounted armies formed a non-substitutable element of early medieval warfare, the idea of their absolute superiority in combat cannot be accepted. So the employment of an equestrian retinue was not the only instrument for the occupation and pacification of an area.

Even the proposed high level of organisation of Boleslav's domains, as opposed to other countries to the east of Bohemia, cannot serve as an indubitable argument for the success of the potential expansion of the

11 It is again a relatively old hypothesis, the author of whose final version was Heinrich Brunner (1887). He thought that during Charles Martel's rule the foot army of Frankish freemen was transformed into a cavalry army of majordomus vassals that enabled the majordomus to defeat the Arabic invasion in 732. However, Heinrich Brunner was sharply criticised by Bernard Bachrach (1970; cf. Hilton/Sawyer 1963, 90–95). Also Matthew Strickland (1997) points out that, despite the fact that the Anglo-Saxons were familiar with horse-riding and the warriors employed horses for transportation, they managed to fight without horses. The reason for this, however, was not ignorance, but rather a culturally determined lack of interest. This historian also rejects the idea of an absolute distinction between stone castles and forts built out of wood and clay, with reference to the great effectiveness of older strongholds (Strickland 1997, 369–373; similarly Klápště 2004, 61–67). Strickland's remarks relativise the significance of a certain sort of military organisation for the establishment of those structures, which also concerns the early Přemyslid Duchy. His conclusions are also indicative of the possibility that the growing importance of cavalry in the Frankish Empire in the 8th century was more a result of social processes connected with the redefinition of elites than of any change in military strategy alone.

12 *Porro adrversae partis populus multo se inferiorem prospiciens, cum illo numero maris supererarent, arenam, id consilii capiunt ut pedites, ascensis quibuscumque animalibus, mediis militum se miscerent cohortibus, ut tam ex figurata specie equitandi quam ex oppositione armorum milites arbitrarentur ab illis. Nec mora, ad duo millia plebeia multitudinis, ascensis asinis, medio equitum ordine partiuntur, equestri. Sed illi expavescentes, fugam per ripas Kari fluminis arripiunt…*

13 *1033 Odo comes Campagniensis ab imperatore interfectus est: et Ebo filius Odonis senioris Dolensis a vicecomite Gaufrido Bituricensium interfectus est. Et ipso anno necdum finito, mense Januario, XVIII die ipsius, hoc est XIV Kalendas Februarii, bellum cruentissimum fuit actum inter eundem Odonem seniorem ducem Dolensem, et episcopum Aimonem et Vicecomitum Gaufridum Bituricensem; sed Domino pro eodem Odone seniore mirabiliter pugnante, eos stravit. Nam ubi phalangas ejus eorum exercitus aspexit, nimio terrore correpti, cum suis principibus in fugam conversi, se praecipites in flumine, qui vocatur Carus unus super alium dederunt, exceptis iis gladiis trucidavit: ipse vero Episcopus in ipso proelio vulneratus, nec tamen mortuus, armis relictis, et ipse et alii per fugam elapsi euaserunt.*

14 Barlow 1999, 26; Myners/Thompson/Winterbottom 1998, 3.242, 454; van Houts 1995, 7.15 (36), 168–170: The possibility of the execution of this manoeuvre in battle is accepted by Bernard S. Bachrach (1971, 344–347). On the battle, see also Körner 1964, 255–266. The author draws attention to Wilhelm's cautious approach. On the most important source, the *Carmen de Hastingae proelio,* see Hirsch 1982.

Bohemian dukes. At this point, one may draw attention to the ferocity of the struggles of the Saxons, supported by other duchies, against the Polabian Slavs. Despite unrelenting pressure, those areas were subjugated only after more than 150 years of fighting. Paradoxically the Ottonian kings achieved the most remarkable success in the 10th century, when the Slavic lands were ruled by ducal dynasties prone to submit under pressure. Also the subjugation of the Alemanni, or of Saxonia, was a gradual process, consequent to the unquestionable victory of the Carolingians and the alleged destruction of the local elites (Borgolte 1984; Keller 1976; Ehlers 2007). It is also the existence of a certain level of political organisation in the area of present–day Lesser Poland that makes it possible to reckon with a political stratagem which, consequently, might have facilitated negotiations and the relatively fast subjugation of these regions by the Přemyslids and Piasts.

So far the limitations of this concept have been discussed. Now those few sources of evidence which form the basis of Graus's and Třeštík's hypotheses will be analysed. In particular, the question of the gradual and inevitable nature of the development of the retinue and the idea of the "extended state retinue" will be dealt with, especially since Třeštík himself supposes a great shift between the expansive "empire" of Boleslav I (935–972) and the more intensively ruled "Czech state" of his 11th-century successors.

Because in Třeštík's work Great Moravia is characterised as a model for the "realms" of the Přemyslids, Piasts and Arpadians, it is necessary to mention the known sources for the warfare it practised. Allegedly, the earliest witness is Ibn Rustah, a Persian geographer of the turn of the 9th and the 10th centuries. He mentions that the duke of the Moravians Svatopluk I (871–894) had horses and arms at his disposal (Pauliny 1999b, 99; cf. Ruttkay 1982, 165–198). Nevertheless, he does not refer to a monopoly on horse breeding. On the contrary, he connects it with notable men, in general terms (Pauliny 1999b, 99). Thereby, he disproves the idea of Svatopluk's monopoly on horse breeding, supposed by Třeštík. The Persian geographer does not mention a large mounted army of Svatopluk's either.

In contrast, an account of the Annals of Fulda (Kurze 1891, 75), describing an assault on a wedding procession on its way from Bohemia to Moravia, may provide proof of the existence of mounted warriors. This account, nonetheless, does not specify any relationship of those equestrians to the Duke of Moravia. It is even possible that the attacking horsemen originated from Bohemia. So the abovementioned passage from the Annals of Fulda cannot serve as proof of the formation of a strong "state retinue". On the contrary, if those 600 equestrians had originated from Prague or another important contemporaneous centre in Bohemia, Kouřim, the Annals would provide evidence against the idea of an inevitable link between the origins of the Přemyslid "realm" and the establishment of a large mounted army, since that allegedly large retinue appears in sources substantially earlier than under the reign of Boleslav I (935–972).

Thus, only warrior graves from the south *suburbium* of the castle in Pohansko (Vignatiová 1992; Macháček 2007, 221–229), together with rather rich graves in other Moravian castles, serve as indubitable evidence of Moravian mounted warriors, settled in those castles. Nevertheless, their relationship to the duke is almost unknown and the stirrups found in the graves signalled the status of the buried person, especially of the children. In assessing them, archaeological research proceeds from the rather questionable results of history. Generally, however, the placing of a sword in a grave can be regarded as a sign of status and does not necessarily refer to the function of a warrior. This holds true especially of the rich graves of children.

Widukind (Hirsch/Lohmann 1935, 3.44, 125) mentions a "legion" of select warriors sent by Boleslav I (935–972) to aid Otto I (936–973) at the Battle of Lechfeld in 955 and the *Annales Sangallenses Maiores* (Pertz 1826, 79) also refer to an army that fought against the Hungarians several days later. This account, too, supports Graus's hypothesis, for it indicates the existence of a large Přemyslid army. However, the sources do not convey whether these were horse or foot and whether or not these troops were a ducal retinue. Beyond any doubt, in contrast, Widukind (Hirsch/Lohmann 1935, 3.69, 144) mentions Boleslav's cavalry when referring to "two troops of horsemen" sent by Boleslav I (935–972) to support his son-in-law, Mieszko (968–992), although is commonly assumed that Mieszko also had strong cavalry at his command.

With this statement, Widukind undermines the testimony of Ibrahim ibn Ja´kúb (Pauliny 1999c, 117; cf. el-Hajjī 1967; Třeštík 2001, 111; Kowalska 1973, 41–47), a Muslim convert of Jewish origin who came from present-day Tortosa, who – according to al-Bakri – wrote: "Mieszko levies taxes in market coins and pays his soldiers from it. …Mieszko has three thousand armoured warriors. A hundred of them correspond to a thousand other soldiers. Mieszko gives clothes to his soldiers and provides them with everything they need…" This version, however, must be compared with another reading of Ibrahim's account, extant in a work of al-Qazwini. Here Ibrahim (Kowalski 1946, 91) points out the infantry character of Mieszko's army, which was equipped with horses only in the event of emergency. In contrast to the viewpoints of modern researchers, according to neither tradition

did Mieszko have a mounted retinue at his disposal. The value of Ibrahim's evidence is, nevertheless, undermined by a number of factors. First of all, it is unclear whether or not he visited Mieszko's realm. Secondly, Ibrahim's work as such does not exist anymore, but has survived only in excerpts that vary in terms of their content, which, indeed, is demonstrated by the points discussed here. Thirdly, Ibrahim came from a completely different cultural environment and it is difficult to estimate to what extent his work shows him as a skilful observer or as a prisoner of the culture from which he came.[15]

However, the Gesta of Gallus Anonymus († c. 1117) seems to support the credibility of Ibrahim's evidence. The first book of the Gesta (Maleczyński 1952, I.8, 25–26) mentions a considerable number of warriors, allegedly supported at Boleslav I the Brave's (992–1025) castles. Barnat (1997, 223–235) believes that Gallus is referring to a source with characteristics similar to the *Indiculus loricatorum*. Nonetheless, in this case one must realise there are several facts that determine the value of this account. First of all, Gallus, who connects the existence of a large Polish army with the rule of Boleslav the Brave, lived approximately a century after this duke. In addition, the main motive which moved Gallus to write his work must be taken into consideration, namely to praise the great Piast dukes, including Boleslav I the Brave (992–1025) (cf. Michałowski 1985; Bisson 1998). Both aspects necessarily undermine trust in the reliability of the chronicler's data concerning the size of troops allocated to the defence of Polish castles. Moreover, in contrast to Ibrahim, Gallus Anonymus does not claim in his work that Boleslav's army consisted to a large extent, or even purely, of members of the retinue.

Even if not mentioning justifiable doubts concerning the existence of a strong mounted army of the Piast dukes, Widukind's account should make one think why Mieszko, with his strong cavalry units, needed the aid of the Bohemian mounted warriors. Two things are apparent in this respect. Firstly, one cannot confuse the number of troops who could be called up from a given area with an army actually prepared for combat. Secondly, even a strong mounted army – if such it was! – did not provide its commander with the certitude of success and so could not be the only sufficient condition of expansion. The extent of forest coverage in Central Europe at that time, which would have essentially limited the manoeuvrability of such armies, opposes this idea, too.

Yet one cannot neglect a rather vague account by an anonymous author who, in the second half of the 10th century, wrote his remarks into the work *On the Governance of the Empire* by Constantine VII Porphyrogennetos (913–959). This anonymous interpolator also mentions a realm of the White Croats (recently on the exaggerated information concerning the size of the Croatian army: Živković 2007). Some Czech and Polish researchers, who also accept the existence of strong mounted armies of the Přemyslids and Piasts, identify this realm with the "empire" of Boleslav I (935–972). Still, the anonymous interpolator of *De administrando imperio* writes that those White Croats have fewer

15 As Ibrahim was used to naming his sources – if not drawing information from his own experience – it seems that he really did visit Mieszko's realm. Even the suspicious survival of his work does not fully question its authenticity: individual versions usually do not exactly correspond to one another. On the other hand, however, there is no contradiction between them. Evidently, those who used his work chose pieces of information at their discretion but did not modify them substantially. It remains to be ascertained to what measure Ibrahim was able to free himself from the culture in which he grew up (for the concept of "otherness" cf. Todorov 1999; Goffman 1963; Esch 1991). Especially in the analysis of these passages, it would be appropriate to examine his work in the wider context of Arab and Greek-Latin geography. One may surmise a certain idea of the extent of Ibrahim's independence of thought only from an analysis of his work, with special regard to those phenomena in which he himself was interested. Passages concerning the Slavic lands convey how broad his interests were: he describes plants grown by the Slavs (Hrbek 1967, 418), diseases they suffer from (ibid., Chapter 13, 417), customs they preserve (ibid., 417); he also mentions goods (ibid., Chapter 6, 413–414) that are produced and traded, the prices of various kinds of goods, distances between individual settlements (ibid., Chapter 3–5, 412–413; ibid., Chapter 7, 414). His ability to distinguish between data from diverse sources is reflected in the fact that, in several parts of his work, he points out that he is appropriating a given piece of information. In his description of Bulgaria, Ibrahim explicitly emphasises that he has not visited that country, but gathered his knowledge from the reports of Bulgarian envoys at Otto I's court in Magdeburg (ibid., Chapter 9, 415). He similarly begins his account of a town of women, gained from Otto I himself. This nonetheless also indicates that he trusted such second-hand information (Kowalski 1946, 50). Thus, one cannot exclude the possibility that Ibrahim trimmed Mieszko's retinue on the pattern of the guards of the Umayyad Caliphs. In that case, however, it would rather have been the period when he lived and grew up in contemporaneous Spain than a previous experience that strongly influenced Ibrahim's work. In his time, similar elite troops of mercenaries formed the power base of Umayyad rulers in a flourishing period, that is, especially under Abd ar-Rahman III (912–961), the first Hispanic Caliph, and later under Vizier al-Mansor (981–1002), an unofficial head of the Empire. Owing to the scant evidence of his own work, one cannot decide whether Ibrahim interpreted Mieszko's retinue from the viewpoint of a subject of the Umayyads, or was able to free himself from his previous experience in this case. Still, it is possible to accept Ibrahim's statement and assume that Mieszko really had an armoured army at his disposal. The only thing that raises doubts at first glance is the numbers given by Ibrahim.

equestrians and infantry warriors than the Croats of the Balkans (Bartoňková 1969b, Chapter 31, 390). This testimony places a question mark over the idea of the great power of the newly established "empire", rather than supporting this concept.

The earliest legends of St Wenceslas (†935) and St Ludmila (†921) feature evidence of retinues of individual members of the ruling dynasty (Ludvíkovský 1958, 59; Chaloupecký 1939b, Chapter 7, 475; Ludvíkovský 1978, Chapter 4, 36). These passages are the topoi of Carolingian hagiography. However, the only place mentioning their size symbolically refers to "thirty men" (Ludvíkovský 1978, Chapter 2, 20; Ludvíkovský 1971). Moreover, the *Legenda Christiani*, containing this information, paradoxically originates only from the end of the 10th century, that is, from the time when the "extended state retinue" is supposed not only to have existed but also to have been the engine of a crisis for the early Přemyslid realm. The *Chronicle of Cosmas* (Bretholz 1923, 1.40, 74–77; ibid., 2.25, 116; ibid., 2.48, 155) also gives plentiful evidence of the existence of personal, sometimes relatively large, retinues of individual Přemyslids in the 11th as well as 12th centuries. So, together with the *Legenda Christiani,* it questions the idea of a gradual and historically inevitable development of the retinue, as Graus and his pupils assert.

It is clear that the existence of the "extended state retinue" cannot be proved and the idea of its inevitable gradual development must be rejected as well (and in contrast to Poland, there is no evidence of the forcible subjugation of Bohemia proper either.) Concerning this issue, research can be based on a direct revision of sources mentioning "mounted armies" of the Přemyslids and Piasts, as well as on an analysis of contemporaneous Anglo-Saxon and Frankish warfare. The relevant sources prove only the potential existence of large early medieval armies of a relatively motley composition that could never be assembled in one place, and not a uniformly organised ducal retinue. The mounted troops of the early Přemyslids were hardly exceptional. Also the explanation of the mechanism of the "extended state retinue's" genesis must be revised, since it inevitably results in a vicious circle: the theory's authors themselves, after all, unwittingly question the capacity of the Přemyslid domain to keep a large retinue; they endeavour to find an explanation in expansion, which allegedly guaranteed income from distant trade. However, they neither explain the circumstances regarding initial investments nor reflect the sources of support of such a large army (cf. Chaloupecký 1939a, 218–222). They also presume that an army of this type would provide the Přemyslids with absolute domination, but a cursory comparison with the situation on the borders of the Slavic lands and the Empire imply rather the opposite.

So it turns out that, although the authors of the theory of the "early medieval state of Central European type" depict quite a motley image of the organisation of the Přemyslid and Piast domains in the Early Middle Ages, they do not solve the question of how this type of social structure was created. The idea of the specific nature of this model is not convincing either, since one could find numerous pieces of evidence in German, French and English historiography (but also in primary sources in the respective countries) proving the contrary. In future, a broader comparison is necessary, based on primary sources and detailed knowledge of relevant secondary literature, of not only Central European societies, but also of the Roman Empire slowly transforming into the medieval world. The Anglo-Saxon environment could provide material suitable for comparison, for it too was not under strong Roman influence and even the size of the area of individual Anglo-Saxon realms corresponded to that of the Přemyslid domain. Such a comparison would make it possible to extend existing knowledge of mechanisms leading to new structures of power within a given society (Jussen 1995, 1998).

However, one might propose another solution to save the idea of looting warriors. A hypothesis of the autonomy of the military and peasant elements of society, among the Saxons as well as in the East, might provide a clue. In such a case, only arbitrarily settled warriors could live on accidentally levied taxes (or rather, spoils) for a longer period of time. Nonetheless, it would also mean rejecting the existence of relatively steady power structures in the given areas and fully revising the prevailing idea of Bohemian (and even early medieval) society of that time. So the Piasts as well as the Přemyslids may have been at the beginning commanders of retinues rather than founders of "realms", who dominated only the surroundings of the central castle and lived on accidentally levied taxes. Only the building of castles that have to be repaired periodically through the work of many people could have transformed the coexistence of elites and "freemen". Thus their disputes would commonly have been settled by negotiations, not by legal action based on indisputable legitimate authority. Indeed, in large areas an independent power capable of enforcing those norms within the role of the frame of reference would have been lacking (Elias 2002, 197–208).[16]

16 The study was supported by the Czech Science Foundation under contract number: GAČR 15-22658S. Project: The Role of Centers in Transitional Society based on the Evidence from early medieval Moravia and Silesia (10th–11th century).

Souhrn

Předpoklady geneze přemyslovské domény. V předloženém příspěvku se polemizuje nad stávajícím konceptem počátků přemyslovského knížectví. Ten je založen na několika předpokladech. Jednak vychází z toho, že knížata financovala svou družinu z prodeje otroků. Jednak předpokládá, že právě tato početná jízdní armáda byla hlavním mocenským nástrojem, s jehož pomocí Přemyslovci (ale také např. Piastovci na území dnešního Polska) vybudovali svou moc. Za další pilíř pak bádání obvykle považuje i soustavu hradisek vybudovaných Přemyslovci v poměrně krátkém období nejprve jen v blízkém okolí Prahy a následně po celých Čechách. Tato studie pochopitelně nepopírá význam hradů jako centrálních lokalit jak po stránce mocenské, tak po stránce sociální nebo ekonomické, nicméně upozorňuje na to, že se představy o hradech 10. století, zejména pak o jejich chronologii, zatím opírají pouze o velmi malou pramennou základnu, jež začíná být teprve velmi pozvolna přehodnocována. Následně se studie věnuje otázce, jakou sociální skupinu můžeme vůbec nazvat družinou a zda dává smysl termín „družinné vojsko". Upozorňuje se, že s nárůstem početnosti nějaké skupiny roste význam pravidel a formálních vazeb, zatímco klesá role osobních vazeb mezi družiníky a pánem, jež je obvykle považována za základ celého družinictví. Stejně tak se upozorňuje na obtíže, jež s sebou při omezených možnostech komunikace nesla kontrola periferie, zejména pak na větší vzdálenosti. To se sebou nese pochybnosti, zda takováto „družina" vůbec mohla být efektivním mocenským instrumentem, který by byl plně kontrolován knížetem. Následně se poukázuje na skutečnost, jak extrémně se liší odhady moderního bádání ohledně početnosti raně středověkých armád a upozorňuje se na praktické logistické limity, omezující případné počty přemyslovských bojovníků, i s omezeními danými neméně rozkolísanými představami o počtech obyvatel tehdejších Čech a jejich schopnosti uživit nepracující elitu. Tato studie dospívá ke kompromisnímu závěru, kdy sice připouští teoretickou schopnost českých knížat (a dalších raně středověkých vládců) postavit do pole značné množství bojovníků, avšak zároveň upozorňuje, že jen menší díl mohl být kvůli logistickým omezením součástí „pohyblivé" armády, zbytek měl zřejmě jenom defenzivní funkci. Ukazuje se také, že pramenné doklady přímo z Čech nebo z blízkého okolí ukazují spíše „kompozitní" armádu, složenou z více různých složek, zejména pak z družin jednotlivých Přemyslovců. Studie také upozorňuje, že využití nových vojenských technologií (jezdci, brnění, meče a kopí) neznamenalo samo o sobě klíč k vítězství v bitvě a uvádí soudobé příklady, kdy sice jízda sehrála důležitou roli v dosažení vítězství, avšak jako taktický prostředek, nikoli jako jediná a hlavní součást dané armády. Následně se v příspěvku probírají doklady, které mají svědčit o existenci tisíců jízdních bojovníků ve službách Přemyslovců, Piastovců, případně velkomoravských knížat a upozorňuje se na slabiny starších interpretací, jež jej vedou k úplnému odmítnutí staršího konceptu, jak jej zformuloval zejména Dušan Třeštík.

Primary sources

Barlow 1999 – F. Barlow (ed.), The Carmen de Hastingae proelio of Guy, Bishop of Amiens (Oxford 1999).

Bartoňková 1969b – D. Bartoňková, Konstantinos Porfyrogennétos De administrando imperio. In: MMFH III, 382–401.

MMFH III: D. Bartoňková/L Havlík/I. Hrbek/J. Ludvíkovský/R. Večerka (eds.), Magnae Moraviae Fontes Historici 3 (Brno 1969).

Beyerle/Buchner 1954 – F. Beyerle/R. Buchner (eds.), Lex Ribvaria. Monumenta Germaniae Historica, Leges nationum Germanicarum 3(*2*) (Hannover 1954).

Boretius 1883 – A. Boretius (ed.), Capitularia regum Francorum 1. Monumenta Germaniae Historica, Leges 2 (Hannover 1883).

Bretholz 1923 – B. Bretholz (ed.), Cosmae Pragensis Chronica Boemorum, Monumenta Germaniae Historica. Scriptores rerum Germanicarum, Nova Seria 2 (Berlin 1923).

Chaloupecký 1939b – V. Chaloupecký, Fuit in provincia Boemorum. In: Chaloupecký 1939a, 459–481.

De Certain 1858 – E. de Certain (ed.), Andreae monachi Floriacensis Miracula s. Benedicti (Paris 1858).

Delisle 1882 – L. Delisle (ed.), Ex Chronico Dolensis Coenobii. Rerum Gallicarum et Francicarum scriptores 11 (Paris 1882) 387–388.

Dostálová 1996 – R. Dostálová (trans.), Komnene, Anna. Paměti byzantské princezny (Prague 1996).

Dümmler 1895 – E. Dümmler (ed.), Caroli Magni epistolae. In. Epistolae Karolini aevi 2, Monumenta Germaniae Historica. Epistolae 4 (Berlin 1895) 528–532, 546–548, 555–566.

Eckhardt 1958 – K. A. Eckhardt (ed.), Lex Inne. In: K. A. Eckhardt (ed.), Leges Anglo-Saxonum (601–925). Westgermanisches Recht 3 (Göttingen – Berlin – Frankfurt 1958).

CDB I: G. Friedrich (ed.), Codex diplomaticus et epistolaris regni Bohemiae 1 (Prague 1904–1907).

Hirsch/Lohmann 1935 – P. Hirsch/H. E. Lohmann (eds.), Widukindi monachi Corbeiensis Rerum gestarum Saxonicarum libri III. Monumenta Germaniae Historica.

Scriptores rerum Germanicarum in usum scholarum separatim editi 60 (Hannover 1935).

Holtzmann 1935 – R. Holtzmann (ed.), Thietmari Merseburgensis episcopi Chronicon. Monumenta Germaniae Historica. Scriptores rerum Germanicarum, Nova series 9 (Berlin 1935).

Van Houts 1995 – E. M. C. van Houts (ed.), The Gesta Normannorum ducum of William of Jumièges, Orderic Vitalis and Robert of Torigni 2 (Oxford 1995).

Hrbek 1967 – I. Hrbek (trans.), Zpráva Ibráhíma ibn Ja῾ḳúba. In: MMFH III, 410–420.

Kowalski 1946 – T. Kowalski (ed. et trans.), Relacja Ibrāhīma ibn Ja`kūba z podróży do krajów słowiańskich w przekazie al-Bekrīego. Monumenta Poloniae historica, Nova Series 1 (Cracow 1946).

Krusch 1913 – B. Krusch (ed.), Vita Corbiniani. Monumenta Germaniae Historica. Scriptores rerum Merovingicarum 6 (Hannover 1913).

Kurze 1891 – F. Kurze (ed.), Annales Fuldenenses. Monumenta Germaniae Historica Scriptores rerum Germanicarum in usum scholarum separatim editi 7 (Hannover 1891).

Ludvíkovský 1958 – J. Ludvíkovský, Passio s. Vencezlai incipiens verbis Crescente fide christiana: Recensio bohemica. In: J. Ludvíkovský, Nově zjištěný rukopis legendy Crescente fide a jeho význam pro datování Kristiána. Listy Filologické 81, 1958, 58–63.

Ludvíkovský 1978 – J. Ludvíkovský (ed.), Legenda Christiani: Vita et passio sancti Wenceslai et sancte Ludmile ave eius (Prague 1978).

Maleczyński 1952 – K. Maleczyński (ed.), Galli Anonymi Cronica et gesta ducum sive principum Polonorum. Monumenta Poloniae historica, Nova Series 2 (Cracow 1952).

Myners/Thompson/Winterbottom 1998 – R. A. B. Myners/R. M. Thompson/M. Winterbottom (eds.), Williami Malmesburiensis Gesta regum Anglorum 1 (Oxford 1998).

Pertz 1826 – G. H. Pertz (ed.), Annales Sangallenses maiores. Monumenta Germaniae Historica. Scriptores 1 (Hannover 1826) 72–85.

Sickel 1879/84 – T. Sickel (ed.), Ottonis I. Diplomata. Monumenta Germaniae Historica, Diplomata regum et imperatorum Germaniae 1 (Hannover 1879/84).

Waitz 1841 – G. Waitz (ed.), Liber de successoribus S. Hildulfi in Medieno monasterio. Monumenta Germaniae Historica. SS 4 (Hannover 1841) 86–92.

Weiland 1893 – L. Weiland (ed.), Constituciones et acta publica imperatorum et regum 1, Inde ab a. DCCCCXI usque a. MCXCVII. Monumenta Germaniae Historica, Constituciones et acta publica imperatorum et regum 1 (Hannover 1893).

References

Abels 1988 – R. P. Abels, Lordship and military obligations in Anglo-Saxon England (Berkeley 1988).

Abels 1998 – R. P. Abels, Richard P. Alfred the Great: war, kingship and culture in Anglo-Saxon England (London 1998).

Adamus 1958 – J. Adamus, Problemy absolutyzmu piastowskiego. Czasopismo Prawnohistoryczne 10(*2*), 1958, 19–76.

Auer 1971 – L. Auer, Der Kriegsdienst des Klerus unter den sächsischen Kaisern 1. Mitt. des Instituts für Österr. Gesch. 79, 1971, 316–407.

Bachrach 1970 – B. S. Bachrach, Charles Martell, mounted shock combat, the stirrup, and feudalism. Studies in Medieval and Renaissance History 7, 1970, 47–75.

Bachrach 1971 – B. S. Bachrach, The feigned retreat at Hastings. Medieval Studies 33, 1971, 344–347.

Bachrach 1985a – B. S. Bachrach, Animals and warfare in early medieval Europe. In: L'uomo di fronte al mondo animale nell'alto medioevo, 7–13. Aprile 1983. Vol. 1. Settimane di Studio italiano sull alto medioevo 31.1 (Spoleto 1985) 707–750.

Bachrach 1985b – B. S. Bachrach, Geoffrey Greymantle, Count of the Angevins, 960: A study in French politics. Studies in Medieval and Renaissance History 17, 1985, 3–67.

Bachrach 1989 – B. S. Bachrach, Angevin campaign forces in the reign of Fulk Nerra, Count of the Angevins, 987–1040. Francia 16, 1989, 67–84.

Bachrach 2000 – B. S. Bachrach, Magyar-Ottonian Warfare: Á propos a new minimalist interpretation. Francia 27, 2000, 211–230.

Bachrach 2010 – B. S. Bachrach, The fortification of Gaul and the economy of the third and fourth centuries. Journal of Late Antiquity 3, 2010, 38–64.

Bachrach/Bachrach 2007 – B. S. Bachrach/D. Bachrach, Saxon military revolution, 912–973? Myth and reality. Early Medieval Europe 15, 2007, 186–222.

Barański 1994 – M. Barański, Załogi grodowe w Polsce wczesnopiastowskiej. In: S. K. Kuczyński (ed.), Społeczeństwo Polski średniowiecznej: Zbiór studiów 6 (Warsaw 1994), 91–99.

Barnat 1997 – R. Barnat, Siły zbrojne Bolesława Chrobrego w świetle relacji Galla Anonima. Przegląd. Hist. 88, 1997, 223–235.

Bartlett 1994 – T. Bartlett, The making of Europe. Conquest, colonization and cultural change, 950–1350 (Princeton 1994).

Bassett 2007 – S. Bassett, Divide and rule? The military infrastructure of eighth- and ninth-century Mercia. Early Medieval Europe 15, 2007, 86–106.

Bisson 1998 – T. N. Bisson, On not eating polish bread in vain: resonance and conjuncture in the Deeds of the Princes of Poland. Viator 29, 1998, 275–289.

Boháč 1978 – Z. Boháč, Dějiny osídlení středního Povltaví v době předhusitské. Prameny a studie k dějinám osídlení 19 (Prague 1978).

Boháč 1983 – Z. Boháč, Vesnice v sídelní struktuře předhusitských Čech. Historická geografie 21, 1983, 37–116.

Boháč 1987 – Z. Boháč, Postup osídlení a demografický vývoj Českých zemí do 15. století. Historická demografie 12, 1987, 59–87.

Borgolte 1984 – M. Borgolte, Geschichte der Grafschaften Alemanniens in fränkischer Zeit. Vorträge und Forschungen Sonderband 31 (Sigmaringen 1984).

Brühl 1975 – C. Brühl, Palatium und civitas: Studien zur Profantopographie spätantiker Civitates vom 3. bis zum 13. Jahrhundert 1, Gallien (Cologne 1975).

Brunner 1887 – H. Brunner, Der Reiterdienst und die Anfänge des Lehnswesens. Zeitschrift der Savigny-Stiftung für Rechtsgeschichte, Germanistische Abteilung 8, 1887, 1–38.

Bubeník 1988 – J. Bubeník, Slovanské osídlení středního Poohří (Prague 1988).

Buchner 1953 – R. Buchner, Textkritische Untersuchungen zur Lex Ribvaria, Monumenta Germaniae Historica-Schriften 5 (Hannover 1940).

Van Caenegem 1963 – R. van Caenegem, La diplôme de Charles le Chauve du 20 juin 877 pour l'abbaye de Saint-Bertin. Tijdschrift voor rechtsgeschiedenis 31, 1963, 403–426.

Chaloupecký 1939a – V. Chaloupecký, Svatováclavský sborník: Na památku 1000. výročí smrti knížete Václava svatého 2(*2*), Svatováclavská tradice. Prameny X. století: Legendy Kristiánovy o svatém Václavu a svaté Ludmile (Prague 1939).

Choc 1967 – P. Choc, S mečem i štítem. České raně feudální vojenství (Prague 1967).

DeMarrais/Castillo/Earle 1996 – E. DeMarrais/L. J. Castillo/T. Earle, Ideology, materialization, and power strategies. Current Anthr. 17, 1996, 15–32.

Dempsey 1982 – G. T. Dempsey, Legal terminology in Anglo-Saxon England: the trimoda necessitas charter. Spaeculum 57, 1982, 843–849.

Dresler 2011 – P. Dresler, Opevnění Pohanska u Břeclavi. In: J. Klápště/Z. Měřínský (eds.), Dissertationes archaeologicae Brunenses/Pragensesque 11 (Brno 2011).

Dresler/Macháček 2008 – P. Dresler/J. Macháček, The Hinterland of Early Medieval centre at Pohansko near Břeclav. In: L. Poláček (ed.), Das wirtschaftliche Hinterland der frühmittelalterlichen Zentren, Internationale Tagungen in Mikulčice VI (Brno 2008) 313–325.

Dreslerová 2006 – D. Dreslerová, Maková Hora – novodobý příklad pravěké opevňovací techniky. Arch. Výzkumy Jižní Čechy 19, 2006, 341–348.

Duby 1973 – G. Duby, Guerriers et paysans, VIIe–XIIe siècle: Premier essor de l'economie européene (Paris 1973).

Ehlers 2007 – C. Ehlers, Die Integration Sachsens in das fränkische Reich (Göttingen 2007).

El-Hajjī 1967 – A. El-Hajjī, Al-Turtūshī, the Andalusian Traveller, and His Meeting with Pope John XII. Islamic Quarterly 11, 1967, 129–136.

Elias 2002 – N. Elias, The civilizing process (Oxford 2002).

Esch 1991 – A. Esch, Anschauung und Begriff: Die Bewältigung fremder Wirklichkeiten durch den Vergleich in Reiseberichten des späten Mittelalters. Historische Zeitschrift 253, 1991, 281–312.

Flori 1988 – J. Flori, Encore l'usage de la lance: La technique du combat chevaleresque vers l'an 1100. Cahiers de civilisation médiévale 31, 1988, 213–240.

Frolík/Sigl 1995 – J. Frolík/J. Sigl, Development of early medieval settlement and related sructural changes within the Chrudim region: A research contribution. Pam. Arch. 86, 1995, 63–104.

Gillmor 1986 – C. Gillmor, War on the rivers: Viking numbers and mobility on the Seine and Loire, 841–886. Viator 19, 1986, 79–119.

Goffman 1963 – E. Goffman, Stigma: notes on the management of spoiled identity (New Jersey 1963).

Graus 1959 – F. Graus, Über die sogenannte germanische Treue. Historica 1, 1959, 71–121.

Graus 1965a – F. Graus, Die Entstehung der mittelalterlichen Staaten in Mitteleuropa. Historica 10, 1965, 5–65.

Graus 1965b – F. Graus, Raněstředověké družiny a jejich význam při vzniku států ve střední Evropě. Československý Časopis Hist. 13, 1965, 1–18.

Graus 1966a – F. Graus, Adel, Land und Herrscher in Böhmen vom 10. bis 13. Jahrhundert. Nachr. der Gießener Hochschulgesellschaft 35, 1966, 131–153.

Graus 1966b – F. Graus, Herrschaft und Treue: Betrachtungen zur Lehre von der germanischen Kontinuität 1. Historica 12, 1966, 5–44.

Haslam 2005 – J. Haslam, King Alfred and the Vikings: strategies and tactics 876–886 AD. Anglo-Saxon Studies 13, 2005, 121–154.

Head 1992 – T. Head, The judgement of God: Andrew's of Fleury's account of the Peace League of Bourges. In: T. Head/R. Landes (eds.), The Peace of God: social violence and religious response in France around the year 1000 (Ithaca 1992) 219–238.

Henning 1982 – F.-W. Henning, Die germanischen Volksrechte als wirtschafts- und sozialgeschichtliche Quelle unter besonderer Berücksichtigung der Lex Ribvaria. In: G. Landwehr (ed.), Studien zu den germanischen Volksrechten: Gedächtnisschrift für Wilhelm Ebel, Rechtshistorische Reihe 1 (Frankfurt/Main 1982) 35–68.

Hill 1969 – D. Hill, The Burghal Hidage: The establishment of a text. Medieval Arch. 13, 1969, 84–92.

Hilton/Sawyer 1963 – R. H. Hilton/P. H. Sawyer, Technical determinism: the stirrup and the plough. Past and Present 24, 1963, 90–100.

Hirsch 1982 – J. C. Hirsch, Church and monarch in the Carmen de Hastingae Proelio. Journal of Medieval History 8, 1982, 353–357.

Hollister 1961 – C. W. Hollister, Five-hide unit and the Old English military system. Spaeculum 36, 1961, 61–74.

Hollister 1962 – C. W. Hollister, Anglo-Saxon military institutions on the eve of the Norman Conquest (Oxford 1962).

Hollister 1977 – C. W. Hollister, Magnates and "curiales" in early Norman England. Viator 8, 1977, 63–81.

Hooper 1992 – N. Hooper, The housecarls in England in

the eleventh century. In: M. Strickland (ed.), Anglo-Norman warfare: Anglo-Norman studies in Late-Saxon and Anglo-Norman military prganization and earfare (Woodbridge 1992) 1–16.

Jan 2006 – L. Jan, Václav II.: Struktury panovnické moci (Brno 2006).

Jäschke 1975 – K. U. Jäschke, Burgenbau und Landesverteidigung um 900: Überlegungen zu Beispielen aus Deutschland, Frankreich und England. Vorträge und Forschungen, Sonderband 16 (Sigmaringen 1975).

Jussen 1995 – B. Jussen, Über "Bischofsherrschaften" und die Prozeduren politisch-sozialer Umordnung in Gallien zwischen "Antike" und "Mittelalter". Hist. Zeitschrift 260, 1995, 673–718.

Jussen 1998 – B. Jussen, Bernhard. Liturgie und Legitimation: Wie die Gallo-Romanen das Römische Reich beendeten. In: R. Blänker/B. Jussen (eds.), Institutionen und Ereignis: Über historische Praktiken und Vorstellungen gesellschaftlichen Ordnens. Veröffentlichungen des Max-Planck-Instituts für Geschichte 145 (Göttingen 1998) 75–136.

Kalhous 2008 – D. Kalhous, Suburbium als Phänomen der frühmittelalterlichen Schriftquellen. In: I. Boháčová/L. Poláček (eds.), Burg, Vorburg, Suburbium: Zur Problematik der Nebenareale frühmittelalterlicher Zentren. Internationale Tagungen in Mikulčice VII (Brno 2008) 19–28.

Kalhous 2011 – D. Kalhous, Mittelpunkte der Herrschaft und Cosmas von Prag. Zum Charakter der Macht des frühmittelalterlichen Fürsten. In: J. Macháček/Š. Ungerman (eds.) Praktische Funktion, gesellschaftliche Bedeutung und symbolischer Sinn der frühgeschichtlichen Zentralorte in Mitteleuropa (Bonn 2011) 669–689.

Kara 2000 – M. Kara, Anfänge der Bildung des Piastenstaates im Lichte neuer archäologischer Ermittlungen. Quaestiones Medii Aevi Novae 5, 2000, 57–85.

Kasten 2009 – B. Kasten, Das Lehnswesen – Fakt oder Fiktion? In: W. Pohl/V. Wieser (eds.), Der frühmittelalterliche Staat: Europäische Perspektiven. Forschungen zur Geschichte des Mitterlalters 16 (Wien 2009) 331–353.

Keller 1976 – H. Keller, Fränkische Herrschaft und alemannisches Herzogtum im 6. und 7. Jahrhundert. Zeitschr. Gesch. Oberrhein 124, 1976, 1–30.

Khazanov 1994 – A. M. Khazanov, Nomads and the outside world. 2nd ed. (Madison 1994).

Klápště 1994 – J. Klápště, Paměť krajiny středověkého Mostecka (Prague 1994).

Klápště 2004 – J. Klápště, Dvě miniatury o proměnách středověké střední Evropy. In: E. Doležalová/M. Nodl/P. Sommer (eds.), Verba in imaginibus: Františku Šmahelovi k 70. narozeninám (Prague 2004) 61–67.

Klápště 2005 – J. Klápště, Proměna českých zemí ve středověku (Prague 2005).

Körner 1964 – S. Körner, The Battle of Hastings, England, and Europe, 1035–1066. Bibliotheca Historica Lundensis 14 (Lund 1964).

Kowalska 1973 – M. Kowalska, Średniowieczna arabska literatura podróżnicza. Zeszyty naukowe Uniwersytetu Jagiellońskiego 317, Práce historycznoliterackie 25 (Cracow 1973).

Krejsová/Vachůt/Hejhal 2008 – J. Krejsová/P. Vachůt/P. Hejhal, Válečné konflikty v raně středověkých Čechách a na Moravě. Konfrontace archeologie a písemných pramenů. In: W. Dzieduszycki/J. Wrzesiński (eds.), Funeralia Lednickie. Spotkanie 10 (Poznań 2008) 385–412.

Krzemieńska/Třeštík 1979 – B. Krzemieńska/D. Třeštík, Hospodářské základy raněstředověkého státu ve střední Evropě: Čechy, Polsko, Uhry v 10. a 11. století. Hospodářské dějiny 1, 1979, 149–230.

Kuhn 1956 – H. Kuhn, Die Grenzen der germanischen Gefolgschaft. Zeitschrift der Savigny-Stiftung für Rechtsgeschichte, Germanistische Abteilung 73, 1956, 1–83.

Leyser 1982 – K. J. Leyser, Henry I and the Beginnings of the Saxon Empire. In: K. J. Leyser, Medieval Germany and Its Neighbours, 900–1250 (London 1982) 11–42.

Lindner 1981 – R. P. Lindner, Nomadism, horses and huns. Past and Present 92, 1981, 3–19.

Łowmiański 1970 – H. Łowmiański, Początki Polski: Z dziejów Słowian w 1. tysiącleciu 4 (Warsaw 1970).

Ludvíkovský 1971 – J. Ludvíkovský, Tunna und Gommon: Wikinger aus der Prager Fürstengefolgschaft? Folia Diplomatica 1, 1971, 171–188.

Luhmann 1979 – N. Luhmann, Trust and power (Chichester 1979).

McCormick 2002 – M. McCormick, New light on the "Dark Ages": How the slave trade fuelled the Carolingian economy. Past and Present 177, 2002, 17–54.

McGovern 1972 – J. E. McGovern, The hide and related land-tenure concept in Anglo-Saxon England, A. D. 700–1100. Traditio 28, 1972, 101–118.

Macháček 2007 – J. Macháček, Pohansko bei Břeclav: Ein frühmittelalterliches Zentrum als sozialwirtschaftliches System. Studien zur Archäologie Europas 5 (Bonn 2007).

Matla-Kozłowska 2008 – M. Matla-Kozłowska, Pierwsi Przemyślidzi i ich państwo (od X do połowy XI wieku). Ekspansja terytorialna i jej polityczne uwarunkowania (Poznań 2008).

Mezník 1998 – J. Mezník, Markraběcí majetek na Moravě za vlády Jana Jindřicha. Mediaevalia Historica Bohemica 5, 1998, 47–66.

Michałowski 1985 – R. Michałowski, 'Restauratio Poloniae' dans l' idéologie dynastique de Gallus Anonymus. Acta Poloniae Historica 52, 1985, 5–43.

Modzelewski 1973 – K. Modzelewski, Grody i dwory w gospodarce polskiej monarchii wczesnofeudalnej. Kwartalnik Hist. Kultury Mat. 21, 1973, 3–34, 157–188.

Pauliny 1999a – J. Pauliny (trans.), Arabské správy o Slovanoch, 9.–12. storočie (Bratislava 1999).

Pauliny 1999b – J. Pauliny (trans.), Ibn Rusty Kitāb–alclāq an–nafisa. In: Pauliny 1999a, 97–104.

Pauliny 1999c – J. Pauliny (trans.), Ibrāhīma ibn Jacqūba al–Isrā'īlī aṭ–Ṭurtūší Dikr aṣ–Ṣaqāliba. In: Pauliny 1999a, 115–124.

Pferschy 1989 – B. Pferschy, Bettina. Bauten und Baupolitik frühmittelalterlichen Könige. Mitteilungen des Instituts für Österreichische Geschichtsforschung 97, 1989, 257–328.

Pohl 1988 – W. Pohl, Die Awarenkriege Karls des Großen, 788–803. Militärhistorische Schriftenreihe 61 (Vienna 1988).

Porsche 2001 – M. Porsche, Römische Stadtmauern im Früh- und Hochmittelalter in Süd- und Westdeutschland. In: S. Felgenhauer-Schmiedt/A. Eibner/H. Knittler (eds.), Zwischen Römersiedlung und mittelalterlicher Stadt: Archäologische Aspekte zur Kontinuitätsfrage. Beiträge zur Mittelalterarchäologie in Österreich 17 (Vienna 2001) 103–115.

Prinz 1971 – F. Prinz, Klerus und Krieg im früheren Mittelalter: Untersuchungen zur Rolle der Kirche beim Aufbau der Konigsherrschaft. Monographien zur Geschichte des Mittelalters 2 (Stuttgart 1971).

Procházka 2009 – R. Procházka, Vývoj opevňovací techniky na Moravě a ve Slezsku v raném středověku, Spisy Arch. Ústavu AV ČR Brno 38 (Brno 2009).

Reuter 1985 – T. Reuter, Plunder and tribute in the Carolingian Empire. Transactions of The Royal Historical Society 5.35, 1985, 75–94.

Reynolds 1994 – S. Reynolds, Fiefs and vassals: The medieval evidence reinterpreted (Oxford 1994).

Roth 1850 – P. Roth, Geschichte des Benefizialwesens von den ältesten Zeiten bis ins zehnte Jahrhundert, reprint (Aalen 1967).

Ruttkay 1982 – A. Ruttkay, The organization of troops, warfare and arms in the period of the Great Moravian State. Slovenská Arch. 30, 1982, 165–198.

Schlesinger 1953 – W. Schlesinger, Herrschaft und Gefolgschaft in der germanisch-deutschen Verfassungsgeschichte. Historische Zeitschrift 176, 1953, 225–275.

Schlesinger 1961 – W. Schlesinger, Burgen und Burgbezirke: Beobachtungen im mitteldeutschen Osten. In: W. Schlesinger (ed.), Mitteldeutsche Beiträge zur deutschen Verfassungsgeschichte des Mittelalters (Göttingen 1961) 158–187.

Sláma 1967 – J. Sláma, Příspěvek k vnitřní kolonizaci raněstředověkých Čech. Arch. Rozhledy 19, 1967, 433–445.

Sláma 1986 – J. Sláma, Střední Čechy v raném středověku 2, Hradiště, příspěvky k jejich dějinám a významu. Praehistorica 11 (Prague 1986).

Sláma 1987 – J. Sláma, K počátkům hradské organizace v Čechách. In: Žemlička 1987, 175–182.

Sláma 1988 – J. Sláma, Střední Čechy v raném středověku 3, Archeologie o počátcích přemyslovského státu. Praehistorica 14 (Prague 1988).

Šmahel 1993 – F. Šmahel, Husitská revoluce I (Prague 1993).

Šmelhaus 1980 – V. Šmelhaus, Kapitoly z dějin zemědělství a lesnictví v době předhusitské. Prameny a Studie Zemědělského Muzea 21 (Prague 1980).

Smetánka 2004 – Z. Smetánka, Legenda o Ostojovi: Archeologie obyčejného života. 2nd ed. (Prague 2004).

Springer 1994 – M. Springer, Agrarii milites. Niedersächs. Jahrb. Landesgesch. 66, 1994, 129–166.

Squatriti 2002 – P. Squatriti, Digging Ditches in Early Medieval Europe. Past and Present 176, 2002, 11–65.

Squatriti 2005 – P. Squatriti, Moving Earth and making difference: dikes and frontiers in early medieval Bulgaria. In: F. Curta (ed.), Borders, barriers, and ethnogenesis: frontiers in Late Antiquity and the Early Middle Ages. Studies in the Late Antiquity and in the Early Middle Ages 12 (Turnhout 2005) 59–90.

Strickland 1997 – M. Strickland, Military technology and conquest. Anglo-Norman Studies 19, 1997, 353–382.

Todorov 1999 – T. Todorov, The conquest of America: the question of the other (New York 1999).

Třeštík 1971 – D. Třeštík, K sociální struktuře přemyslovských Čech: Kosmas o knížecím vlastnictví půdy a lidí. Československý Časopis Hist. 19, 1971, 537–564.

Třeštík 1987 – D. Třeštík, Pád Velké Moravy. In: Žemlička 1987, 27–767.

Třeštík 1997 – D. Třeštík, Počátky Přemyslovců: Vstup Čechů do dějin, 530–935 (Prague 1997).

Třeštík 2001 – D. Třeštík, "Eine große Stadt der Slawen namens Prag": Staaten und Sklaven in Mitteleuropa im 10. Jahrhundert. In: P. Sommer (ed.), Boleslav II.: Der tschechische Staat um das Jahr 1000. Colloquia Mediaevalia Pragensia 2 (Prague 2001) 93–138.

Třeštík/Žemlička 2007 – D. Třeštík/J. Žemlička, O modelech vývoje přemyslovského státu. Český Časopis Hist. 105, 2007, 122–164.

Vaníček 1988 – V. Vaníček, Šlechta a český stát za vlády Přemyslovců: K formování ideologie české šlechty od 11. do počátku 14. století. Folia Hist. Bohemica 12, 1988, 65–122.

Velímský 1998 – T. Velímský, Trans montes ad Fontes! K roli újezdů při středověkého kolonizaci středních a vyšších poloh na území severozápadních Čech (Most 1998).

Vignatiová 1992 – J. Vignatiová, Pohansko 2, Slovanské osídlení jižního předhradí (Brno 1992).

Weber 1958 – M. Weber, Wirtschaft und Gesellschaft: Grundriß der verstehenden Soziologie. 3rd ed. (Tübingen 1958).

Werner 1968 – K. F. Werner, Heeresorganisation und Kriegsführung im deutschen Königreich des 10. und 11. Jahrhunderts. In: Ordinamenti militari in Occidente nell'Alto Medioevo 2, Settimane di studio del Centro italiano di Studi sull'Alto Medioevo 15(*2*) (Spoleto 1968) 813–832.

Wolfram 1994 – H. Wolfram, Karl Martell und das fränkische Lehenswesen: Aufnahme eines Nichtbestandes. In: J. Jarnut/U. Nonn/M. Richter (eds.), Karl Martell in seiner Zeit. Beihefte der Francia 37 (Sigmaringen 1994) 61–78.

Wormald 1982 – P. Wormald, The Burhs. In: J. Campbell (ed.), The Anglo-Saxons (Oxford 1982) 152–153.

Zápotocký 1965 – M. Zápotocký, Slovanské osídlení na Litoměřicku. Pam. Arch. 56, 1965, 205–385.

Zápotocký 1977 – M. Zápotocký, Slovanské osídlení na Děčínsku. Arch. Rozhledy 29, 1977, 521–553.

Žemlička 1974 – J. Žemlička, Osídlení Zbraslavska od 10. do počátku 15. století. Pam. Arch. 65, 1974, 419–465.

Žemlička 1980 – J. Žemlička, Vývoj osídlení dolního Poohří a Českého Středohoří do 14. století (Prague 1980).

Žemlička 1987 – J. Žemlička (ed.), Typologie raně feudálních slovanských států: Sborník příspěvků z mezinárodní konference na téma "Vznik a rozvoj slovanských raně feudálních států ve střední a jihovýchodní Evropě" (Praha 1987).

Žemlička 1997 – J. Žemlička, Čechy v době knížecí (Praha 1997).

Živković 2007 – T. Živković, Contribution to the new reading about Constantine Porfyrogenitus' statement on the numbers of Croat horsemen, foot soldiers and sailors in early 10th century. Byzantinoslavica 65, 2007, 143–151.

Doc. Mgr. David Kalhous, Ph.D.
Ústav pomocných věd historických a archivnictví
FF MU Brno
Gorkého 63/14
CZ-602 00 Brno
E-mail: dkalhous@googlemail.com

Bewaffnung und Reiterausrüstung des 8. bis 10. Jahrhunderts in Mitteleuropa
Waffenform und Waffenbeigaben bei den mährischen Slawen
und in den Nachbarländern

in der Reihe „Internationale Tagungen in Mikulčice“ (ITM) Band IX
Herausgegeben von Lumír Poláček – Pavel Kouřil

Verantwortlicher Redakteur: Lumír Poláček
Redaktion: Petr Luňák, Zdeňka Pavková
Layout und Textgestaltung: Zdeňka Pavková
Übersetzung: Pavla Seitlová, Tereza Bartošková
Sprachliche Korrekturen: Torsten Kempke, Paul Michael Maddock
Umschlaggestaltung: Pavel Dvorský, Barbora Pokorná / Atelier Zidlicky
Druck: Azu design s. r. o.

© 2019 Archeologický ústav Akademie věd České republiky, Brno, v. v. i.

ISBN 978-80-86023-59-5
ISSN 1804-1345

INTERNATIONALE TAGUNGEN IN MIKULČICE

BEWAFFNUNG UND REITERAUSRÜSTUNG DES 8. BIS 10. JAHRHUNDERTS IN MITTELEUROPA