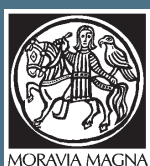
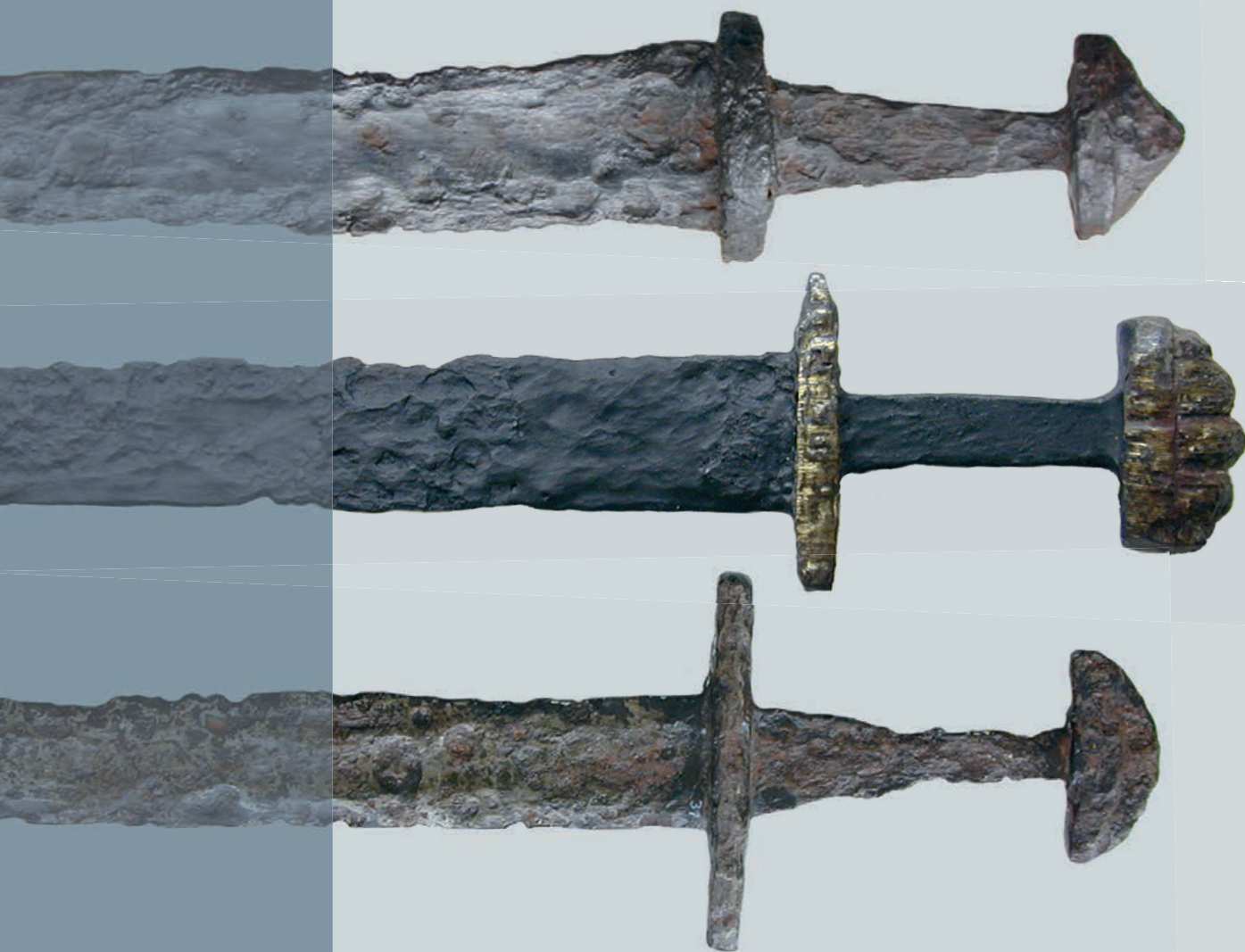


IX

INTERNATIONALE TAGUNGEN IN MIKULČICE



ARCHÄOLOGISCHES
INSTITUT AV ČR
BRNO 2019

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

Waffenform und Waffenbeigaben bei den
mährischen Slawen und in den Nachbarländern

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

SPIŠY 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. Ruttkey, 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 Reitzug 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 Reitzug 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 Topolčany, 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 vorausgegangenen 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 Ostmitteleuropas in den letzten drei Jahrhunderten des ersten Jahrtausends.

Leider erscheint die Sammelchrift 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-Trapíkovo 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 Sammelchrift 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

Elements of Weaponry from the 9th- and 10th-Century Trepcza Complex near Sanok, South-Eastern Poland

PIOTR N. KOTOWICZ – MARCIN GLINIANOWICZ – ARKADIUSZ MICHALAK

Elements of Weaponry from the 9th- and 10th-Century Trepcza Complex near Sanok, South-Eastern Poland. *The article is concerned with the early medieval military artefacts which were found during archaeological excavations at the Trepcza complex (Sanok District, Podkarpackie Voivodeship). The complex is composed of several elements: two strongholds (“Horodna” site 1 and “Horodyszczę” site 2), a barrow cemetery (site 3) and the “Horodna” stronghold suburbium (site 25). Among the artefacts which were found in these sites were: one battle axe, one axe and four fragments of other axes, 34 arrowheads (including specimens with tang and triple-winged), one single ring of chain mail, two eyelet spurs, three other spurs and three loops for spurs, one iron bit and one horseshoe. All these objects were probably used in the 9th (2nd half?) and also probably the beginning of the 10th century.*

Keywords: South-Eastern Poland – Trepcza complex – 9th- and 10th century – weaponry – Great Moravian influences – Magyars

The early medieval settlement complex in Trepcza (Sanok District, Podkarpackie Voivodeship) is located in the south-eastern, Carpathian part of Poland, on the left edge of the valley of the River San (Fig. 1). According to current research, in the Early Middle Ages those lands were occupied by the Lendian tribe. They settled mainly along river valleys and on opportune slopes of extensive mountainous valleys (see PARCZEWSKI 1991; 2007).

At least 10 sites, from the 8th–10th centuries, are located in the immediate vicinity of Trepcza and Sanok.¹ The main concentration of these sites is visible north of the village of Trepcza. The settlement complex in Trepcza is located near the northern outlet of the Sanok valley, in the place where the valley of the River San is at its narrowest. This location had some strategic meaning (see KOTOWICZ 2005a, 65–68). It is composed of several elements: two strongholds (“Horodna” site 1

and “Horodyszczę” site 2), a barrow cemetery (site 3) and the “Horodna” stronghold suburbium (site 25).

The stronghold on the “Horodyszczę” hill (site 2) is situated at 429 m AMSL, almost 140 m above the bottom of the valley of the River San and encompasses an area of c. 4 ha. An oval stronghold courtyard (area over 1 ha) is surrounded by an earthen wall and secured from the north and the west by two other partial ramparts. From the southern side, the remains of a 4th and 5th wall are slightly visible (see GINALSKI 1997, 221; GINALSKI 1999/2000, 211–213, Fig. 2). The “Horodna” stronghold (site 1) is located lower, c. 365 m AMSL, 90 m above the bottom of the valley and encompasses an area of c. 5 ha. An oval courtyard (area 1 ha) is surrounded by an earthen wall, and its fortification system is reinforced by four segmental walls, of which three are in the form of a horseshoe (see KOTOWICZ 2006a, 454, Fig. 1). In 1995–2003 J. Ginalski conducted archaeological excavations at the “Horodyszczę” stronghold which were aimed at examining a large part of the courtyard as well as fragments of two walls. Excavations revealed that this place was used twice in

1 PARCZEWSKI/POHORSKA-KLEJA 1995, Fig. 13; see also: PORADYŁO 2002; POHORSKA-KLEJA 2006a; 2006b; KOTOWICZ 2008a.

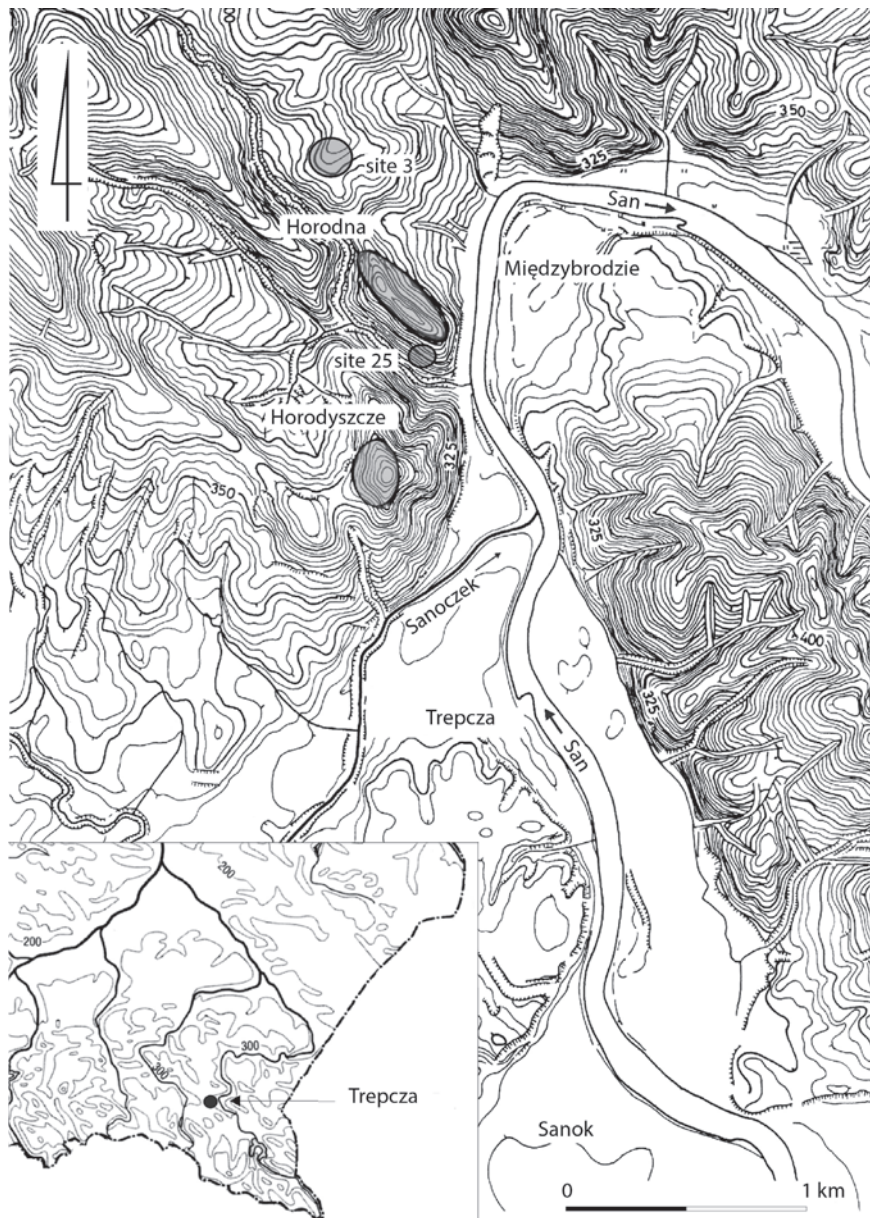


Fig. 1. Early medieval settlement complex in Trepcza, Sanok distr., Podkarpackie voivodeship, Poland. After Ginalski 2001. Drawing by P. N. Kotowicz.

the Early Middle Ages: in the 9th–10th centuries and in the 11th–13th centuries (GINALSKI 1997; 1999/2000; 2001). Unfortunately, the “Horodna” stronghold has not yet been excavated (see KOTOWICZ 2006a). Apart from defensive sites in the Trepcza complex, there is also a cremation barrow cemetery (site 3) and the “Horodna” stronghold suburbium (site 25). The burial ground contains c. 40 barrows, but only five of them were excavated in the 1950s (JANOWSKI 1973; 1984). The latest excavations, conducted by M. Glinianowicz in 2007/08 and 2010, at site 25, were located below the “Horodna” stronghold, on its southern slope. The settlement contained several suitable plateaus, located in terraces, of which only the two lowest ones, situated c. 297 and 314 m AMSL, c. 10 and 25 m above the bottom of a flowing stream, were excavated. During the excavations, the remains of two semi-dugouts from

the 9th–10th centuries and six other features were recorded.²

During the penetration of the site with a metal detector as well as archaeological works conducted at the “Horodyszczce” stronghold (Fig. 2) and at site 25 (Fig. 3), 51 artefacts, which can be connected with weaponry and horse riding equipment from the 9th to the 10th centuries, were discovered.³

2 Unpublished. The chronology of this site can be specified after a careful analysis of pottery. It should be mentioned that during the metal detector survey of the entire site in 1995, several artefacts of later chronology than these presented here, including two bolt heads, a rowel spur and three horseshoes, were discovered (KOTOWICZ 2002, 12, 14–15, Cat. 124, 127–129, Pls. X:3, XII:5–6,8; KOTOWICZ 2006a, 461, 466, Fig. 2:I–J, 3:A,F–H).

3 Two iron plates with the remains of rivets, which were

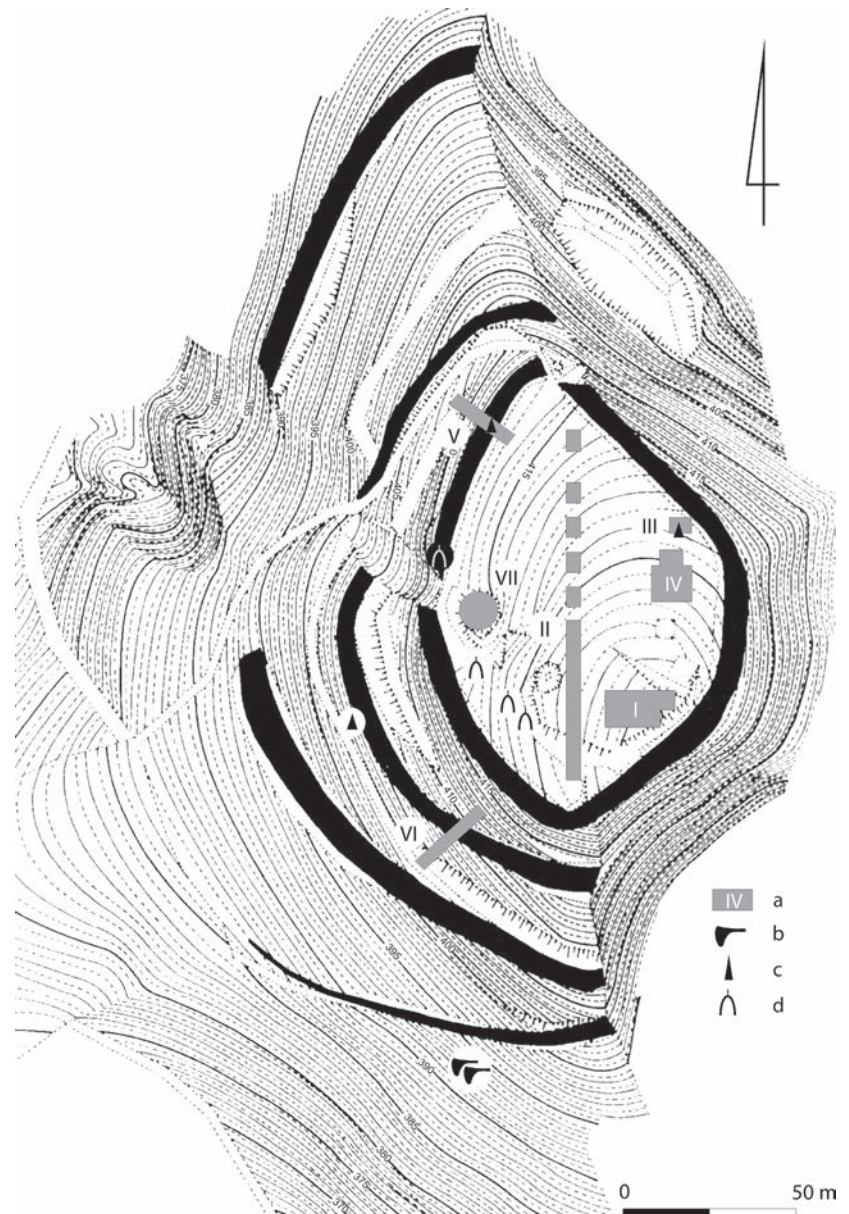


Fig. 2. Trepcza, "Horodyszcz" Stronghold, site 2. Location of military finds from the 8th–10th centuries: a – archaeological trenches; b – axes; c – arrowheads; d – spurs. Drawing by P. N. Kotowicz.

The most important finds seem to be two blunt weapon specimens which were part of a hoard of iron objects, found with a metal detector in 1995, below Wall 4 of the "Horodyszcz" stronghold (GINALSKI 1997). Apart from an iron bowl and another of its fragments, scissors, a plough and an adze, the hoard contained a battle-axe similar to Great Moravian Type *bradatica*, as well as an axe with a cap and wings of Type VE according to A. RUTTKAY (1976). The first artefact (Fig. 4:2) can be classified as J. Poulik's Type I. The presence of this type is limited to Central Europe only; however, almost 99% of finds of this kind come

previously considered as elements of lamellar armour, were excluded from this analysis (KOTOWICZ 2002, Cat.122–123, Pl. IX:6, 10; KOTOWICZ 2006a, 461, Fig. 2:K–L). The state of its preservation as well as its fragmentariness do not allow for the making of any further conclusions.

from Moravia and Slovakia (DOSTÁL 1966; BARTOŠKOVÁ 1986; HANULIAK 2004). The chronology of these artefacts can be narrowed down to the period between the second half of the 8th century and the first half of the 10th century. All "Polish" finds (19 specimens) can be included in this time horizon.⁴ The closest territorial analogies to the artefact from Trepcza are battle-axes from the Lublin region (which is located north of Trepcza); a specimen from the stronghold in Żmijowiska, which can be dated to the first half of the 10th

⁴ To the collection of artefacts presented by P. N. KOTOWICZ (2009; see also GÓRA/KOTOWICZ 2008/09) we have to add another specimen, which was found accidentally on the peak of Konik Mountain in Góry Złote (in the Sudetes) near Łądek Zdrój, loco distr. (see KONCZEWSKA/KONCZEWSKI 2010 – unfortunately the state of research presented in this text is very incomplete).

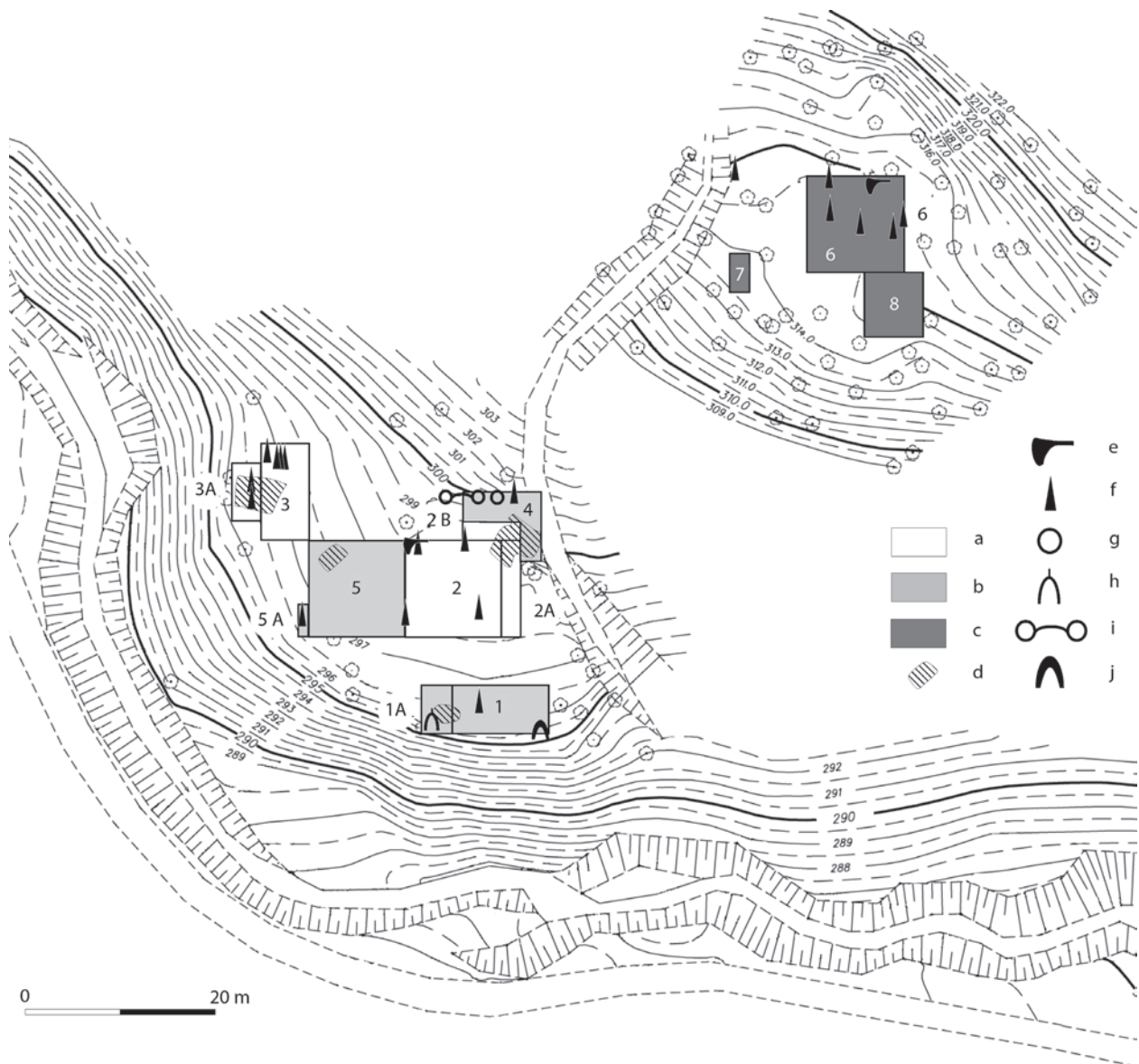


Fig. 3. “Horodna” Stronghold suburbium, site 25. Location of military finds from the 9th–10th centuries: a – archaeological trenches in 2007; b – archaeological trenches in 2008; c – archaeological trenches in 2010; d – archaeological features; e – axes; f – arrowheads; g – chain mail; h – spur; i – bit; j – horseshoe. Drawing by P. N. Kotowicz.

century, as well as accidental finds from the villages of Łąki-Byki and Nowosiółki Przednie (see KOTOWICZ 2006b, 24, Fig. 4:1–2; 2009). The same type is probably represented by an accidental find from Niebieszczany near Sanok (GINALSKI/GLINIANOWICZ/KOTOWICZ 2013, Fig. 15:1), as well as a battle-axe from Zastawie (KOTOWICZ 2006b, 24, Fig. 4:4). A battle-axe of this type is also known from the cemetery located in the Spiškie Tomašovce – Smižany stronghold in Eastern Slovakia (STAŠÍKOVÁ-ŠTUKOVSKÁ et al. 2006, 216, Fig. 18:4). The second artefact, the axe with a cap and wings (Fig. 4:1), is a very popular form, which appears mainly in the 10th and 11th centuries on the territory of early medieval Rus, the Baltic countries and Poland (see NADOLSKI 1954, 45; KIRPIČNIKOV 1966, 36–37;

KOTOWICZ 2008b). In previous literature its genesis was connected with Rus territory;⁵ however, discoveries of several artefacts of this type at Great Moravian sites from the second half of the 9th century⁶ seriously question this hypothesis (see GINALSKI/KOTOWICZ 2004, 192; KOTOWICZ/ŚWIĄTEK 2006, 126–128). The closest parallels to this type are chronologically uncertain stray finds at the nearby Trzcinica stronghold (KOTOWICZ/ŚWIĄTEK 2006, 115–119, Fig. 1:1–2).

Curiously, the axe beard had probably been broken and newly remodelled, and the battle-axe haft hole was

5 KIRPIČNIKOV 1966, 36–37.

6 BARTOŠKOVÁ 1986, Fig. 1 and 19C:7, Pl. II:13; HANULIAK 2004, 146–147, Fig. IX:5, LIV:10.

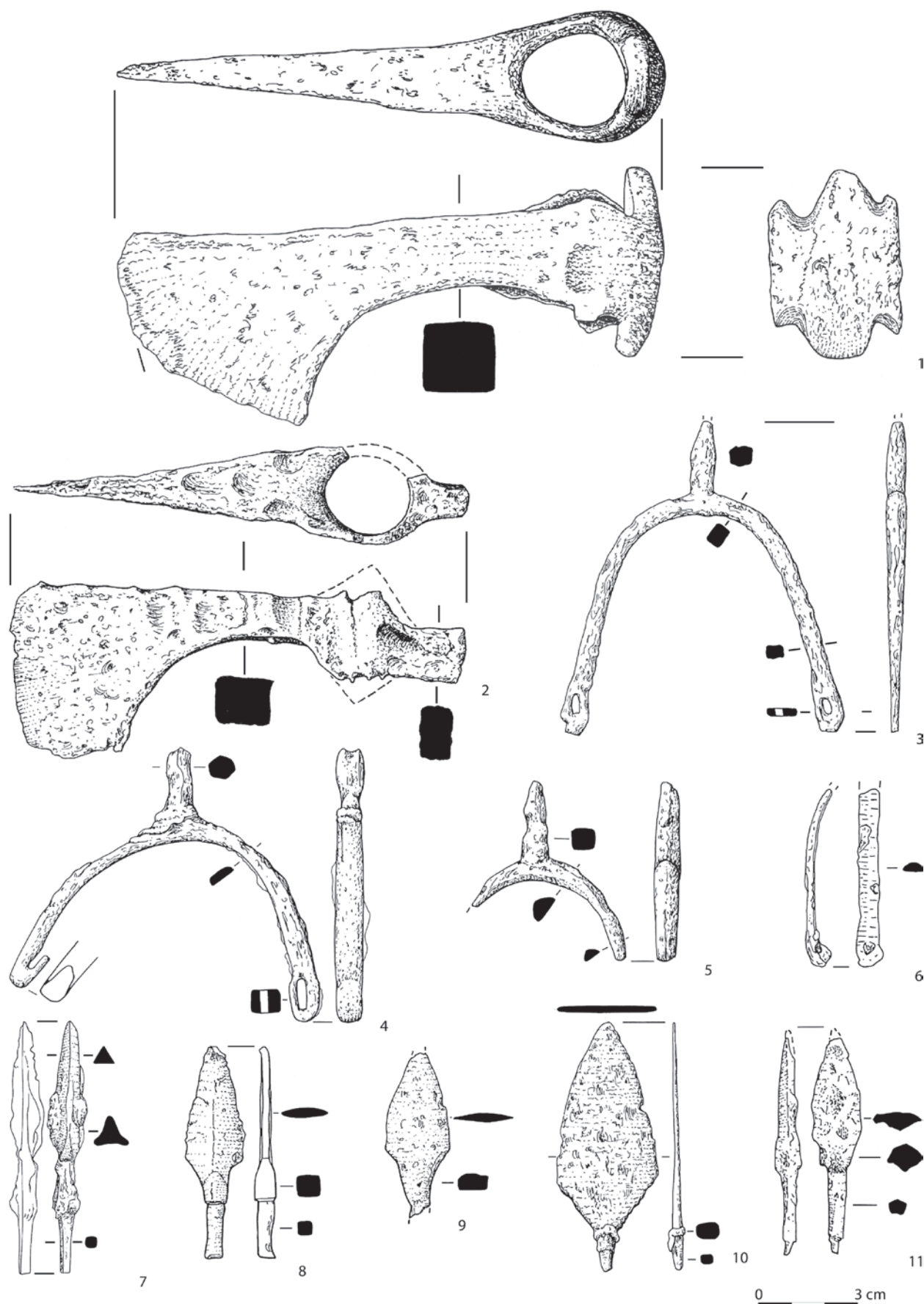


Fig. 4. “Horodyszczę” Stronghold, site 2: 1 – axe; 2 – battle axe; 3 – eyelet spur; 4–6 – hook-like spurs; 7–11 – arrowheads with tang. After GINAŁSKI/KOTOWICZ 2004.

severely damaged, which suggests that mostly broken objects were put into the hoard (GINALSKI/KOTOWICZ 2004, 190–197). Metallographic examination of both artefacts revealed that they were made of wrought iron, but using sophisticated technology. The axe blade core was made of soft iron, on which carburised overlays were put. The battle-axe was produced from two parts of iron with a high phosphorus content (GINALSKI 1997, 235–236). Analysis of those artefacts suggests that this hoard was hidden at the end of the 9th or beginning of the 10th century (GINALSKI 1997; GINALSKI/KOTOWICZ 2004, 193).

We were not able to classify four other axe fragments discovered at site 25. One of them was found in the humus layer of trench 2 in 2007 (Fig. 5:1). The second one was discovered in the humus layer in trench 6 in 2010 (Fig. 5:3). Two other artefacts (from 2008 and 2010) were found during a metal detector survey in a heap which had been created in the course of the exploration of trenches 4 and 6 (Fig. 5:2, 4). However, their archaeological context indicates that they can be dated to the 9th–10th centuries.

The most numerous and interesting category of finds from the Trepcza complex are arrowheads. We can relate at least 34 artefacts of this kind to the tribal period.

Among the huge number of arrowheads discovered at the “Horodyszcz” stronghold only five artefacts come unquestionably from the 9th–10th centuries.^{7, 8} Unfortunately, almost all of them were discovered without archaeological context, in the upper humus layer. One of them was probably discovered in the north-western part of the stronghold’s courtyard in 1995 (Fig. 4:11); another one in the eastern part of the courtyard in trench 3 in 1998 (Fig. 4:8); the next one in the second space between the walls on the western side in 1998 (Fig. 4:9); the triple-winged artefact in Wall 1 of the stronghold, in trench 5 in 1999 (Fig. 4:7); and the last one in trench 7 (the 13th-century well) in 2000 (Fig. 4:10).

29 arrowheads appeared at the “Horodna” stronghold suburbium (site 25). Eight of them (Fig. 6:2–4, 12–13, 6:5–6, 11) were discovered during the metal detector survey in 1995 (KOTOWICZ 2006a, 457, 460–461, Fig. 2:A–H). The remaining 21 artefacts come from the archaeological excavations held in 2007–2008 and 2010

(see GLINIANOWICZ/KOTOWICZ 2008, Fig. 3:3–5, 7–8, 10–12).

In 2007, 10 arrowheads were discovered, including three specimens with sockets and seven with tangs. They appeared as the most numerous artefacts in trenches 3 and 3A (the extension of trench 3) – three of them were found in the branches of a tree (Fig. 7:2, 4, 7) and two in the occupational layer (Fig. 6:1, 7:16) (including one above building 1 – Fig. 7:16). A single arrowhead with a tang was excavated from the fill of building 1 (Fig. 7:13) and another one, which probably came from the same feature, was found in a heap (Fig. 6:5). The other artefacts appeared in trench 2 – one in the humus layer (Fig. 7:15), and two in the occupational layer (Fig. 6:8, 7:10).

Only four arrowheads were discovered during excavations in 2008; among them were one arrowhead with sockets and two specimens with tangs. The first of them was uncovered in the occupational layer in trench 5 (Fig. 6:11). The artefacts with tangs were discovered in trench 1 (occupational layer – Fig. 7:8) and trench 4 (Fig. 7:1), in a layer of cinders (with a chainmail ring). The other one, with barbs, is preserved in a fragmentary condition and it is hard precisely to classify it in one of the groups. It was unearthened in trench 5A, in the occupational layer (Fig. 6:7).

In the (as of yet) last season of excavations at site 25, in 2010, seven arrowheads were discovered, including three specimens with sockets and four with tangs. One arrowhead was found in the humus layer (Fig. 7:3), another four in the occupational layer in trench 6 (Fig. 6:9–10, 7:9, 12) and the next one came from a heap which was created during the exploration of that trench (Fig. 7:14). The last artefact was found in the forest humus, c. 6 m west of trench 6 (Fig. 6:6).

These artefacts represent a very broad range of types and variants of early medieval arrowhead. To classify them we used the typology of P. ŚWIĄTKIEWICZ (2002, 61–62, Pl. 5; 2010, 29–33), which (according to the authors) is open enough and at the same time complex enough to be a good pattern for the systematising of large collections of arrowheads in the future (critically STRZYŻ 2006, 80 Note 40).

Group I, according to P. Świątkiewicz, is represented by eight arrowheads with sockets, among which the variant with two barbs (I:A1 – eight artefacts) dominates. All of these artefacts (Fig. 6:2–3, 5–6, 8–11) were discovered at site 25 (KOTOWICZ 2006a, Fig. 2:A–C; GLINIANOWICZ/KOTOWICZ 2008, Fig. 3:6).⁹ It is possi-

7 GINALSKI/KOTOWICZ 2004, 209–215, Cat. 32, 36–38, 45, Pls. VI:1, 4, 6, 8, VII:4; ŚWIĘTOSŁAWSKI 2006, Fig. 19:A, 23:B, D; GLINIANOWICZ/KOTOWICZ 2008, 82, Fig. 4:3–5.

8 All other artefacts have a very broad chronology, comprising the whole early medieval period, or they are related to the time of colonisation of the stronghold territory in the Rus epoch (GINALSKI/KOTOWICZ 2004; KOTOWICZ 2005a; GLINIANOWICZ/KOTOWICZ 2008, Fig. 5:4–13).

9 From the “Horodyszcz” stronghold we know of 10 arrowheads of this kind, but in this case we are not certain to which tribal or early state occupational horizon we should relate them (see GINALSKI/KOTOWICZ 2004, 207, Pls. III:2–7, IV:1–4).

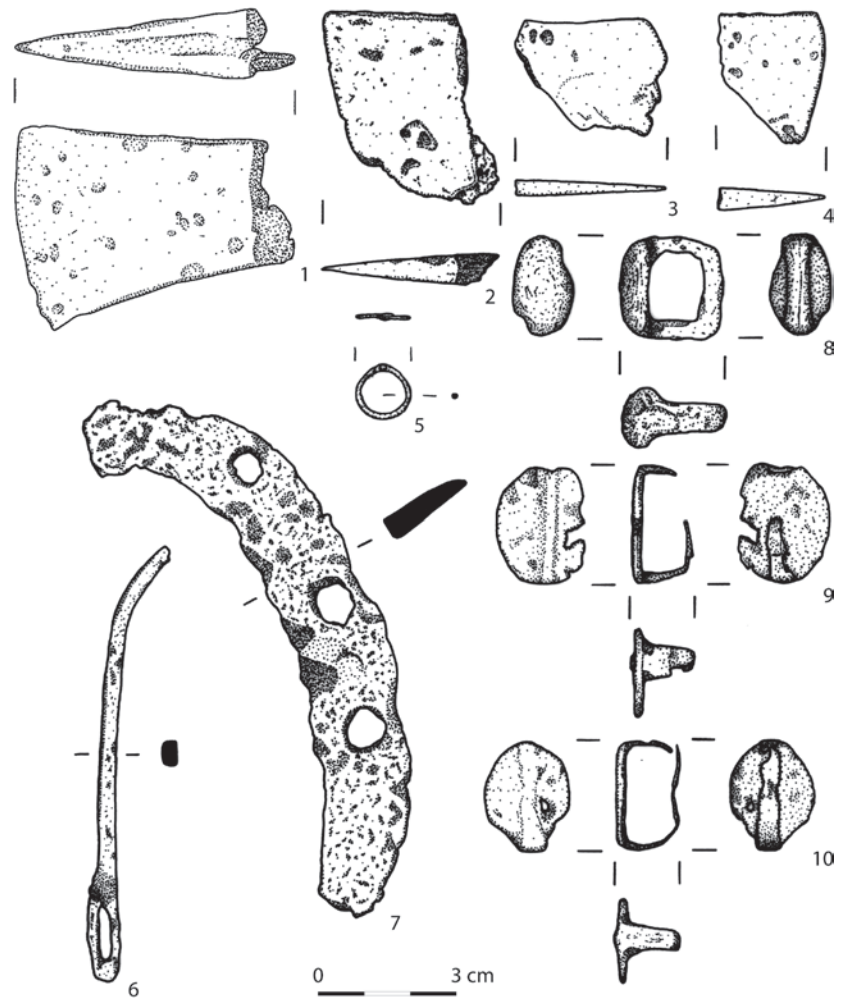


Fig. 5. "Horodna" Stronghold suburbium, site 25: 1–4 – wfragments of axes; 5 – fragment of chain mail; 6 – fragment of eyelet spur; 7 – horseshoe; 8–10 – loops. Drawing by M. Glinianowicz and P. N. Kotowicz; redrawing by A. Sabat.

ble that two fragmentarily preserved specimens (without socket) discovered in 1995 and in trench 5A in 2008 (Fig. 6:4, 7) may also belong to this group. Similar arrowheads, also belonging to Type A1a of A. Ruttkay, were spread over Central Europe; however, their chronology is very broad – from the 6th to the 14th centuries (KURNATOWSKA 1973, 97; RUTTKAY 1976, 327–328; GINALSKI/KOTOWICZ 2004, 207). There are many analogies to this group of finds from the tribal strongholds in Lesser Poland (Małopolska). They appear at the sites that are connected with the Lendian tribe, such as Trzcinica,¹⁰ but they are particularly common in the Vistulan tribal strongholds: Łapczyca, Naszacowice, Szczaworyż, Stradów, Wietrzno-Bóbrka, Zawada and Zawada Lanckorońska¹¹. This type of arrowhead was found in grave 13 in the Magyar cemetery in Przemyśl (KOPERSKI 2003, Fig. 4:a; STRZYŻ 2006, Fig. 19:37).

10 GANCARSKI 2003, Fig. 3:1–3, 4:1–3, 5–6; STRZYŻ 2006, Fig. 16:1–3, 5–6, 10–11.

11 POLESKI 1999/2000, Fig. 14:1; POLESKI 2004, Fig. 131:10–12, 176:10–11; STRZYŻ 2006, Fig. 16:15–25, 27–31, 17:25–27, 19:10, 12, 17–18, 20, 24, 21:3.

As can be seen, the chronology mainly depends on the archaeological context; hence we date them to the 9th–10th centuries. It is considered that arrowheads of this kind were used with arrows for universal purposes: the hunting of big animals, fighting armoured enemies or during a siege (MEDVEDEV 1966, 56).

An exceptionally interesting artefact is a triple-winged arrowhead with a socket (Fig. 6:1), discovered in trench 3 in 2007 (GLINIANOWICZ/KOTOWICZ 2008, Fig. 3:9). We classified it as Type I:B2. Not so long ago we knew of only one specimen of this type, which came from Slovakia, but without any specific find place – it represents Type A9 according to A. RUTTKAY's typology (1976, 329, Abb. 54). Lately, other arrowheads of this type have been accidentally discovered alongside other Great Moravian artefacts, at the Neštich stronghold in sv. Jur near Bratislava (TURČAN 2000, 130, 132, Tab. IV:12), and four other ones at another Slovakian site, Dračí hrádek in Stupava. The author of the study of artefacts from this site connects it, without convincing evidence, with the 13th century, even though artefacts older than the 10th century were also discovered there (FARKAŠ 2006, 283, Fig. 33:6, 8; 34:12, 15; FARKAŠ 2007,

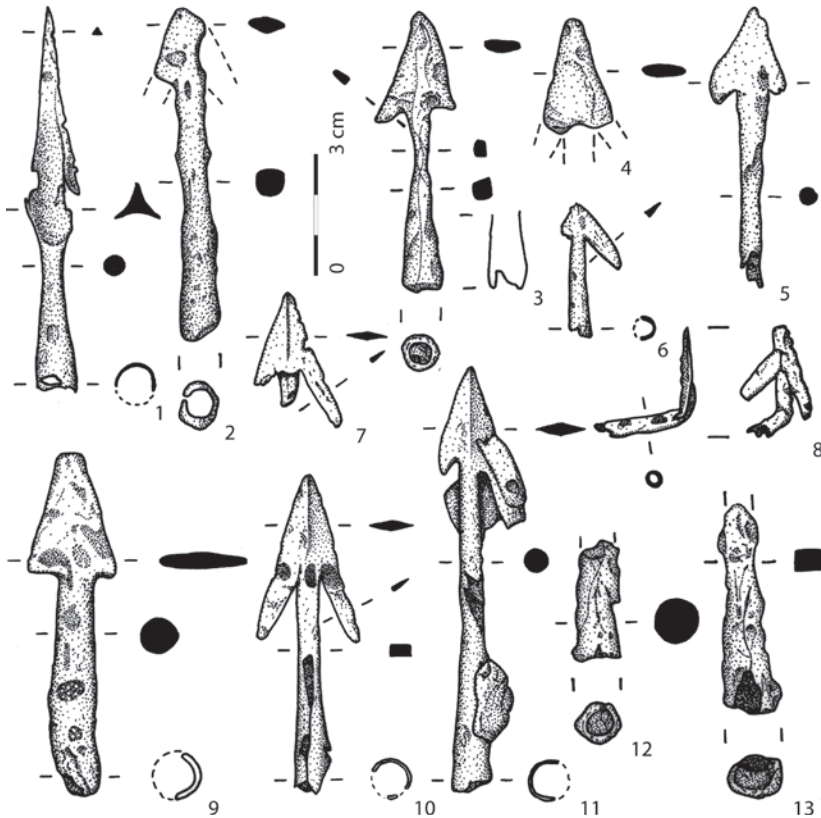


Fig. 6. "Horodna" Stronghold suburbium, site 25: 1–13 – arrowheads with socket and fragments of them. Drawing by M. Glinianowicz and P. N. Kotowicz; redrawing by A. Sabat.

219, Fig. 3). The hypothesis about an earlier chronology for this type of arrowhead was confirmed by recently published artefacts from the inhumation cemetery in Prušánky, Moravia, where three specimens of this kind were discovered in grave 663 (KLANICA 2006, 47, Pl. 92:4–6, Katalog 287). Furthermore, Type I is represented by two sockets of arrowheads (KOTOWICZ 2006a, Fig. 2:D–E), but their finer characteristics cannot be given (Fig. 6:12–13).

Group II according to P. Świątkiewicz is represented by tang arrowheads with diverse forms of leaves. 21 specimens were included here. Among them two artefacts were classified as Type II-1:A2 (Fig. 7:2–3), which includes arrowheads with flat, triangular leaves and one-piece tangs. One of them was previously published (GLINIANOWICZ/KOTOWICZ 2008, Fig. 3:10). Artefacts analogous in construction, which very often differ in their proportions, were discovered at many sites from the 9th–10th centuries in Southern Poland, as well as on the territories of today's Slovakia and the Czech Republic, mainly in Moravia. We know of them e.g. from Będzin, Gilów, Naszacowice, Mikulčice, Břeclav-Pohansko, Staré Zámky near Líšeň and Nĕmĕtice.¹² Similar arrowheads often appear in Magyar

cemeteries,¹³ including the one which was found in grave 1 in nearby Przemyśl (KOPERSKI 2003, Fig. 2:c).

Another eight artefacts were classified as Type II-2:A2: arrowheads with two-piece tangs and flat, triangular leaves (Fig. 4:8, 10, 7:5–10). Several specimens have already been published.¹⁴ Just like the aforementioned type, Type II-2:A2 was broadly spread over the area taken up by Great Moravia, and in culturally influenced lands. These arrowheads, included in Sub-type B1b and B1c according to A. Ruttkay and dated to the 9th–10th centuries (RUTTKAY 1976, 329–330) are known from Mikulčice, Břeclav-Pohansko, Staré Zámky near Líšeň and Nĕmĕtice.¹⁵ Like the previous ones, they also appear in Magyar graves from the 10th century (Točík 1968, Pl. IV:14; LII:6).

6:4, 7, 8:12; Břeclav-Pohansko: KOUŘIL 2008, Fig. 11:1, 3–4, 9, 13); Staré Zámky near Líšeň: KOUŘIL 2008, Fig. 13:8–12; Nĕmĕtice: LUTOVSKÝ/MICHÁLEK 2000, Fig. 4.

13 e.g. Točík 1968, Pl. VI:2, XIV:11, 16, XXVI:15–16, L:5, LIX:3, 18; NEPPER 2002, Pl. 13:7, 51:4, 141:41.

14 GINALSKI/KOTOWICZ 2004, Pl. VI:4, 8; KOTOWICZ 2006a, Fig. 2:F–G; GLINIANOWICZ/KOTOWICZ 2008, Fig. 3:4–5, 8; 4:4–5.

15 Mikulčice: KOUŘIL 2008, Fig. 6:2–3, 8, 10, 7:8, 8:13, 9:7–8; Břeclav-Pohansko: KOUŘIL 2008, Fig. 11:8; Staré Zámky near Líšeň: KOUŘIL 2008, Fig. 13:5–6; Nĕmĕtice: LUTOVSKÝ/MICHÁLEK 2000, Fig. 4.

12 Będzin: ŚWIĘTOSŁAWSKI 2006, Fig. 21:B; Gilów: JAWORSKI 2005, Fig. 148:b, d; Naszacowice: POLESKI 2004, 274–275, Fig. 131:2, 8); Mikulčice: KOUŘIL 2008, Fig. 5:2, 8–9, 13–14,

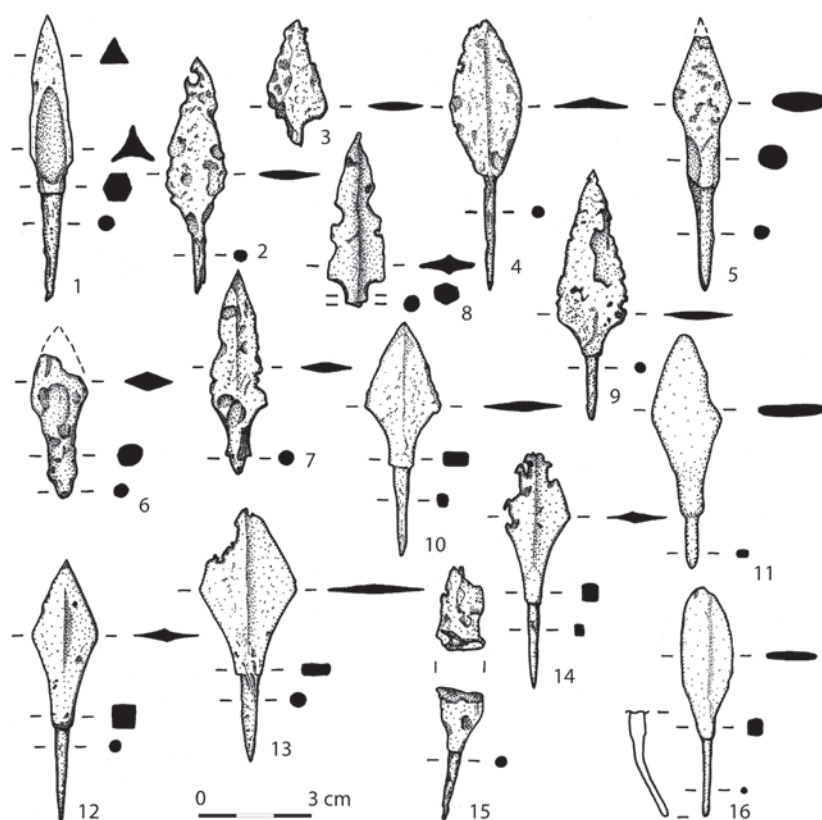


Fig. 7. “Horodna” Stronghold suburbium, site 25: 1–16 – arrowheads with tang. Drawing by M. Glinianowicz and P. N. Kotowicz; redrawing by A. Sabat.

One arrowhead with a triangular leaf and a partially preserved tang (Fig. 4:9) cannot be classified within any of the groups distinguished above.

A single arrowhead (GLINIANOWICZ/KOTOWICZ 2008, Fig. 3:11) represents Type II-1:A3, where arrowheads with one-piece tangs and flat, lineal or elliptic leaves are classified (Fig. 7:4). Specimens of this kind, analogous to the artefact from Trepcza (based on the shape of the leaf), are in most cases linked with Ruttkay’s Subtype B1a and are common at 9th–10th century Slavic sites (RUTTKAY 1976, 329), including these mentioned before (KOUŘIL 2008, Fig. 3:3, 5:7, 7:7, 8:8, 11:2), but also Magyar graves,¹⁶ especially grave 6 from the cemetery in Przemyśl (ŚWIĘTOSŁAWSKI 2006, Fig. 16) and grave 1 in Halič-Krilos (PASTERNAK 1937, Fig. CXXXV:15, 17).

Another large group of arrowheads (seven specimens) should be classified as Type II-2:A3 (Fig. 4:11, 7:11–16). This group includes artefacts with two-piece tangs and flat, lineal or elliptic leaves. Two of them have been published.¹⁷ One of the artefacts was bent at a right angle to the symmetry axis (Fig. 7:15), which

was probably a consequence of hitting a hard surface. These arrowheads are very diverse in terms of their size and leaf shape. Three of them have elliptic leaves (Fig. 4:11, 7:15–16); the rest are lineal. Similar arrowheads, belonging to Ruttkay’s Subtype B2a and B2b, are frequently found at sites from the 9th and 10th centuries (RUTTKAY 1976, 330). They were discovered in strongholds from Southern Poland, such as Naszacowice, Niedów, Stradów,¹⁸ and also in Moravia, Slovakia and Bohemia.¹⁹ Moreover, they appear in Magyar cemeteries.²⁰

Particularly interesting finds are two triple-winged arrowheads with two-piece tangs (Fig. 4:7, 7:1), belonging to Type II-2-B2 in the typology of P. Świątkiewicz and Type B6 according to A. Ruttkay. In the light of analogous specimens, they were dated to the 8th and the beginning of the 9th centuries and in the literature are connected with Avar influences (see POLESKI 2009, 102–103). We should, however, note that these artefacts can have broader references, both with regard to their

16 Točík 1968, Pls. XVII:15, XXXII:9–10, XL:5; RUTTKAY 1976, 329; NEPPER 2002, Pls. 13:10–11, 82:20, 108:4–5, 143:11, 225:4, 268:7–8, 314:4–5.

17 GINALSKI/KOTOWICZ 2004, 212, Pl. VIII:1; KOTOWICZ 2006a, Fig. 2:H; GLINIANOWICZ/KOTOWICZ 2008, Fig. 3:3, 12

18 Naszacowice: POLESKI 2004, 274–275, Fig. 131:14, Niedów: JAWORSKI 2005, Fig. 8:e; Stradów: ŚWIĘTOSŁAWSKI 2006, Fig. 20:C.

19 Moravia: KOUŘIL 2008, Fig. 9:4, 13:3; Slovakia: STAŠŤKOVÁ-ŠTUKOVSKÁ et al. 2006, 216, Fig. 18:3; Bohemia: LUTOVSKÝ/MICHÁLEK 2000, Fig. 4).

20 Točík 1968, Pl. XLVIII:5, LII:5, LIX:15; NEPPER 2002, Pl. 13:5.

chronology and territorial distribution (ŚWIĘTOSŁAWSKI 2006, 79–82). They were known among settled people, e.g. the Balts,²¹ in Rus,²² as well as on territories that were influenced by Great Moravia,²³ where such artefacts occasionally appear in graves from the first half of the 9th century (DOSTÁL 1957, 41, Fig. 3; PROFANTOVÁ 2003, 57, Fig. 27:3). From the immediate vicinity of the River San area, arrowheads of this kind are common in Avar cemeteries in Slovakia (ČILINSKÁ 1973; RUTTKAY 1976, 331, Fig. 54). From the Polish lands (mainly from Lesser Poland) only several similar arrowheads are known. They were discovered in strongholds in Gródek and Szaśiadka in the Lublin region and Zawada Lanckorońska in Lesser Poland, as well as in undefined circumstances in Maszków.²⁴ One of them was discovered at the nearby stronghold in Trzcynica (POLESKI 2009, Cat. 39). In the light of the chronology of site 25, we cannot exclude the possibility that these two artefacts were being used in the 9th century.

The arrowheads discovered at both sites from Trepcza show huge typological diversity but, what is more important, they all have numerous parallels in both Slavic and Nomadic milieus.

A defensive weapon is decently represented by one artefact, discovered in a burnt layer in site 25, trench 4, during excavations in 2008. It is a single ring of chain mail (0.9–1.0 cm in diameter) made of an oval cross-sectioned wire with flattened and riveted ends (Fig. 5:5). We are not aware of any parallel artefacts from Lendian tribal lands; however, analogous finds (with regard to both technology and size) are known from other strongholds in Southern Poland. Two joined and riveted rings were excavated from a rock rubble layer at the stronghold in Szczaworyż (9th–10th century) without archaeological context (STRZYŻ 2006, 95, Cat. XI/22, Fig. 25:4). A slightly larger piece of riveted chain mail comes from another stronghold in Lesser Poland – Naszacowice, where it was discovered in a moat fill of the stronghold's western suburbium, in a layer hypothetically dated to a period after 989 (?).²⁵ A small fragment of riveted chain mail was found during excavations of the eastern part of the stronghold in Lubomia, dated to the 8th–9th centuries

(SZYDŁOWSKI 1970, 187; STRZYŻ 2006, 96). Finds of this kind of armour from the territories located in the southern part of the main ridge of the Carpathian Mountains and the Sudetes show a great range of uniformity in this matter. Fragments of (riveted?) chain mail were excavated from graves 221, 277 and 511 in the cemetery in Devínska Nová Ves (RUTTKAY 1976, 341; ŠIMČÍK 2007, 182, Pl. I:23–24), and smaller pieces from individual graves in the cemetery in Čakajovce (grave 770), Bratislava-Devin (grave 77) (ŠIMČÍK 2007, 182, Pl. I:46; for a different point of view see HANULIAK 2004, 129) and Velký Grob (RUTTKAY 1976, 341 – here as remains of shin protection). What is more, similar finds appear at strongholds. Small fragments of putative chain mail were discovered in a residential feature from the beginning of the 9th century at the Slovakian stronghold in Pobedim (RUTTKAY 1976, 341; ŠIMČÍK 2007, 182, Pl. I:22). Three metallographically examined rings from chain mail from the stronghold in Břeclav-Pohansko were a little smaller than the specimen from Trepcza; however, they were also made by riveting (PLEINER 2002). Fragments of closely undefined chain mail were discovered in the layer from the second half of the 8th century in Mikulčice (KAVÁNOVÁ 2003, 239, Fig. 40:9), as well as in the Bohemian stronghold in Rubin near Podbořany (BUBENÍK 2006, Fig. 4:11–12). Another remnant of chain mail (diameter 0.8–1.7 cm; wire diameter 0.11–0.3 mm), discovered without archaeological context in Slovakian Smolenice-Molpír, is connected with this period of time. According to P. Šimčík, they can be dated to the 8th and 9th centuries, mainly because of their “archaic look” and due to the fact that other artefacts of the same chronology were discovered at this site (ŠIMČÍK 2007, 178–179, 182, Pl. I:1–21). It seems that a precise chronological classification of these artefacts, discovered without archaeological context, is very problematic.²⁶ Unfortunately discoveries of only individual rings of chain mail in the aforementioned sites do not allow us to reconstruct the appearance of armour used by tribes in Southern Poland and on the territory of Great Moravia.²⁷ Apparently, it was not much different from chain mail of a little later chronology, known mainly from the Nomadic milieu of the Pontic-Caspian steppe. It is important to state that most of the known fragments were made in an analogous way – by riveting.

21 KAZAKEVIČIUS 2004, 28–39, Fig. 11, 12.

22 MEDVEDEV 1966, 58.

23 e.g. JAWORSKI 2005, 57–59, Fig. 12; STAŠŠÍKOVÁ-ŠTUKOVSKÁ et al. 2006, 216, Fig. 18:1.

24 NADOLSKI 1954, Fig. XXXI:3; KUŚNIERZ 2006, 86, Pl. IV:18; KUŚNIERZ 2009, Fig. 17:30; STRZYŻ 2006, 85–86; ŚWIĘTOSŁAWSKI 2006, 79–82, Fig. 19:B–C; POLESKI 2004, 370–371, Fig. 196:3, 5; POLESKI 2009, Cat. 33, 38–41.

25 POLESKI 2004, 275, Fig. 130:17; STRZYŻ 2006, 95–96, Cat. XI/5, Fig. 25:1.

26 The author cautions that some rings could have older or slightly younger chronology. This is caused by the fact that at this site remains of La Tène and Roman as well as late medieval period settlements were noted (ŠIMČÍK 2007, 184).

27 P. ŠIMČÍK (2007, 183–184) thinks, probably rightly, that small fragments of chain mail, discovered in graves, could have a symbolic meaning – they were miniature versions of real chain mail or were used as amulets.

In the area of the Trepcza complex several spurs and parts of spurs have been found. At the “Horodyszczce” stronghold one “eyelet” and three hook-like spurs were discovered. From the excavations of the “Horodna” stronghold’s suburbium comes another “eyelet” spur, as well as three strap loops for spurs (?).

The most interesting finds are two iron “eyelet” spurs of Type II/A according to D. BIALEKOVÁ (1977). A wholly preserved spur from “Horodyszczce” was found in the south-eastern part of the stronghold’s courtyard in the humus layer, near the place (c. 10–15 m away) where two hook-like spurs were discovered (Fig. 4:3). This artefact is unornamented and was made from a single piece of metal, and therefore was considered local.²⁸ We have to remember that almost all known Carolingian spurs have spikes riveted to the heel band and were made of bronze (BIALEKOVÁ 1977, 123–124). They are also shorter than classic “eyelet” spurs. Part of this kind of spur was found during excavations at site 25 in 2008 (Fig. 5:6), unfortunately in the humus layer, near Feature 8 (trench 1A). Spurs of this kind are very rare in the Polish lands, and artefacts from Trepcza are, so far, regarded as the easternmost specimens.²⁹ From Eastern Poland, beside the spur from the Trepcza complex, two other similar specimens are known: from Trzcynica and Chodlik stronghold near the Lublin (GARDAWSKI 1970, 107, Fig. 52; GANCARSKI 2003, 273, Fig. 2:1). In the Slavic world, they are usually related to the early Carolingian period and dated to the second half of the 8th and the beginning of the 9th centuries (GINALSKI/KOTOWICZ 2004, 219–222, with further reading). It seems that the inspiration for both spurs from Trepcza and the artefact from Trzcynica was taken not directly from the regions ruled by the Carolingians, but from the territory of today’s Slovakia (or maybe Moravia), where we know of several similar specimens (BIALEKOVÁ 1977, 123; PROFANTOVÁ 1993, 71).

Three other spurs, one wholly preserved and the parts of two others, were found in the “Horodyszczce” stronghold’s courtyard in the humus layer. Two of them were discovered in the south-eastern part of it in 1998, but only a fragment of another one in 2003 in the western part of Wall 1. The entirely preserved specimen has one fastener, which is hook-like, and

the other one is in the form of a closed eye (Fig. 4:4). It belongs to K. WACHOWSKI’s (1991) Type III/B–C. Based on analogies, this specimen can be dated to the same period as the eyelet spurs (GINALSKI/KOTOWICZ 2004, 222, Pl. XI:3). Unfortunately, the state of preservation of the remaining spurs (Fig. 4:5–6) does not allow for further chronological analysis (GINALSKI/KOTOWICZ 2004, 222–223, Pl. XI:2,4). We should also mention three other hook-like spurs which come from the south-western part of the Lendian tribal lands. One of them, dated to the end of the 7th or the 8th centuries, was discovered in the settlement in Bachórz.³⁰ Another hypothetical spur part was found in House 1 in the settlement from the 8th and the beginning of the 9th centuries in Stasiówka.^{31, 32} Yet another, unfortunately unpublished, ornamented artefact was discovered in Przemyśl in Feature 13 (BOBER 2006, 175, Note 2).

Iron strap loops can also be related to the tribal period in Poland. They were all excavated at site 25 (three specimens). One of them (Fig. 5:8) was discovered during the site penetration with a metal detector in 1995 (KOTOWICZ 2005b). The other two were found during the archaeological excavations in 2007 and 2008. The first was found in a heap near trench 3 in 2007 (Fig. 5:10); it undoubtedly came from a humus layer above residential Feature 1 (GLINIANOWICZ/KOTOWICZ 2008, 81, Fig. 3:14). The second strap loop (Fig. 5:9) was discovered in similar circumstances in trench 1 in 2008. These two artefacts have an elongated rib on the small shields. In the literature, such artefacts are mainly considered part of spur fittings, which included buckles, strap loops and strap ends, which allow the spur to be fastened to the shoe. We should consider that those artefacts may have been used in a completely different role, e.g. as clothes or belt elements (see WACHOWSKI 1992). It is difficult to be certain about the use if the artefact was not found in a characteristic context (e.g., a grave). The number of finds from the Polish lands is quite high, containing c. 20 artefacts. The closest analogy to the Trepcza artefacts from the immediate vicinity comes from the stronghold in Wietrzno-Bóbrka near Krosno (ŻAKI 1957, Fig. 16:5; TYNIEC 1991, 251; KOTOWICZ 2005b, 116, Fig. 4:7). These belt loops are considered in the literature to be Great Moravian of the late Carolingian type and are generally dated to the

28 GINALSKI/KOTOWICZ 2004, 219–222, Pl. XI:1; STRZYŻ 2006, 111–112, Fig. 29:5; KOTOWICZ 2006b, 24, Fig. 3:3.

29 It is possible that the spur from Dorohobuż in Volhynia (Ukraine) can be of the same attribution. It has identical “eyelet” terminals and was excavated from the layer from the second half of the 11th–first half of the 12th centuries (PRIŠEPA/NIKOL’ČENKO 1996, 113, Fig. 68:2; KOTOWICZ 2006b, 24). We cannot exclude that it was found not in its original position, particularly with regard to the fact that at this site another hook-like spur was discovered.

30 PARCZEWSKI 1996, 279–280, Fig. 16:5; KOTOWICZ 2006b, Fig. 2:1; KOTOWICZ/MICHALAK 2007/08, 396, Fig. 5:1.

31 OKOŃSKI/SZPUNAR/SZPUNAR 2002; KOTOWICZ/MICHALAK 2007/08, 396–397, Fig. 5:2.

32 This type of spur can also be represented by a partially preserved specimen from Borowa, South-Eastern Poland (KOTOWICZ/MICHALAK 2007/08, 398, Fig. 5:3).

9th or the beginning of the 10th centuries (KOTOWICZ 2005b). Recent research by Paweł RZEŹNIK (2006, 183, Note 12) indicates that some of them may have been used longer in Southern Poland. It is still open to debate whether these artefacts are Great Moravian imports or were produced in local workshops.

Another military element from Trepcza is a fragment of an iron bit (Fig. 8). It was discovered in a layer of ashes (trench 4) at site 25 in 2008.³³ Bits of this type had curb bits, which did not survive in the case of the artefact from Trepcza. Specimens with a similar construction of mouthpiece, classified as Rutkay's type I, were connected with the nomadic milieu and came to Central Europe through the Avars in the 7th century, who also used them in the 8th century.^{34, 35} Although iron bits appeared at Great Moravian sites in the 9th century (MĚCHUROVÁ 1984, 268), in the Polish lands they could have remained in use for slightly longer (POLESKI 2004, 208). Analogous artefacts to the specimen from Trepcza are known from the hoards of iron objects discovered in the main centres of power, such as Pobedim or Mikulčice,³⁶ as well as in the occupational layers of strongholds,³⁷ including single specimens from Poland (CHMIEŁOWSKA 1984, Fig. 2; SIKORA 2007, Fig. 5:6). This kind of bit often appears in Old Magyar cemeteries (RUTKAY 1975, Abb. 24:9; RUTKAY 1976, 357), which is confirmed by numerous specimens from graves in Southern Slovakia, Hungary and Romania.³⁸ Based on this short analysis it is clear that similar bits, if they lack curb bits, are difficult to date. In this case we must correlate artefact dating with the chronology of the site and put it in the period of the 9th and 10th centuries. Hence it is hard unequivocally to say whether this specimen is related to Great Moravian or Magyar influences.

The last artefact connected with a broadly defined military sphere which we will discuss in this paper is a partially preserved flat horseshoe without calkins, with three holes for nails (Fig. 5:7). The horseshoe

was discovered in 2008 in a humus layer of trench 1 at site 25. Although it was fragmentarily preserved, it can be classified as type I/1 or II/1 in the horseshoe typology proposed by J. Kaźmierczyk for materials from Silesia (KAŹMIERCZYK 1978, 19–33, Fig. 3, 9), where similar specimens of an extremely archaic form appear in occupational contexts (not earlier than the first half of the 11th century). Other scholars claim that parallel horseshoes in simple form have a very broad chronology – they are known from the La Tène period and survive into the 19th century, but the Slavs might have been using them from the 10th century onwards (e.g. BAXA 1981, 426–427, 431, Fig. 3:6). A horseshoe found in Pobedim (but in a different form), dated to the first half of the 9th century, indicates that these artefacts may have appeared earlier in Central Europe (BIALEKOVÁ 1981, 46, 90–91, Fig. 54; BIALEKOVÁ 1985, 59). This assumption is confirmed by the discoveries of artefacts from two Slavic cremation barrows in Białogórze in Lusatia and Białka in the region of Lublin (Poland). The cemetery in Białka is dated to the 10th century, although Białogórze has a broad chronology from the 7th to 10th centuries (KOTOWICZ 2008c, 370–371). It is safe to assume that the horseshoe from Trepcza can be clearly connected with the time horizon of the 9th–10th centuries.

To conclude, the military artefacts from the Trepcza complex which have been discussed in this paper form one of the largest collections of their kind, not only in South-Eastern Poland. All the artefacts discovered at the “Horodyszczce” stronghold and the suburbium of the “Horodna” fortress were used in the same time horizon – the 9th (2nd half?) and probably the beginning of the 10th centuries. This also applies to the finds of Carolingian examples of eyelet spurs, which in a classic definition should be dated to the second half of the 8th and the beginning of the 9th centuries (WACHOWSKI 1992, 35–36). Based on this fact, and keeping in mind the results of the analysis of a late Avar bronze belt fitting which was discovered in “Horodyszczce” (see GINALSKI/GLINIANOWICZ/KOTOWICZ 2013, 408, 410, Fig. 5:1) we previously assumed that the stronghold at site 2 was built in the second half of the 8th century (see GINALSKI/KOTOWICZ 2004, 232). However, at these sites there is a lack of pottery forms produced in the 8th century. What is significant is that the pottery discovered at the “Horodyszczce” stronghold was not dated to before the end of the 9th and the 10th centuries (ŁOJOWSKA 2006). Nevertheless, the pottery from site 25 is generally (and was initially) dated to the 9th–10th centuries. It seems that the idea of making similar spurs on the periphery of Carolingian influences survived longer, deep into the 9th century. This opinion can be confirmed by P. Rzeźnik's observations about Great Moravian

33 We have to remember that in the same not very deep layer, a single ring of chain mail was discovered.

34 RUTKAY 1976, 357, Fig. 75; BIALEKOVÁ 1981, Fig. 55; ZÁBOJNÍK 2004, 51, Fig. 19:3–6.

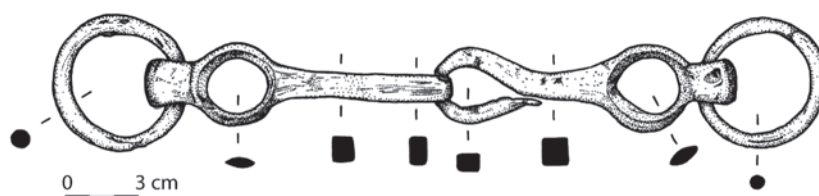
35 From the territories invaded by nomadic tribes, through the Slavs, these bits wander in the 9th century to Eastern and Northern Europe, but mainly appear in Europe on sites from the 10th century, as well as in the next century (KIRPIČNIKOV 1973, 13–14, Fig. 4, Pl. II:3; RUTKAY 1976, 357).

36 MĚCHUROVÁ 1984, 268–269, Pl. III:7; BARTOŠKOVÁ 1986, Fig. 10:A:45, 13:C:9.

37 MĚCHUROVÁ 1984, 268–269, Pls. II:6, III:12, IV:9, 11.

38 Točík 1968, Pls. XXI:5, XXIV:9, XXXVII:10, XXXVIII:3, 13, XXXIX:7, XLIV:7, LXII:1–2; FODOR 1996b, 340–341, Fig. 1; MESTERHÁZY 1996a, 212, Fig. 3; MESTERHÁZY 1996b, 371.

Fig. 8. “Horodna” Stronghold suburbium, site 25: bit. Drawing by M. Glinianowicz; redrawing by A. Sabat.



elements surviving on the territory of Poland into the late 10th century (RZEŹNIK 2006, 182–183).

Most of the characteristic elements of the aforementioned weaponry have their closest parallels in the southern world – in the Great Moravian or Nomadic milieus; some of them could have been locally produced. The last ones, which have an interregional character, are mainly arrowheads with sockets and barbs, hook-like spurs, most likely the horseshoe and a ring from chain mail. Imports or imitations from the circle of influences from Great Moravia are probably the axe and the battle-axe from the hoard of iron objects, eyelet spurs, loops and most definitely the triple-winged arrowheads with sockets. Generally all tang arrowheads are connected with the Nomadic zone. Artefacts which almost certainly originated in the Avar milieu are the triple-winged arrowheads, which survived in the Slavic world practically throughout the entire 9th century. Many tang arrowheads with flat leaves found in Trepcza show numerous Old Magyar references. The one incomplete bit from site 25 may be of Nomadic origin, but similar forms were used among the Slavs, so this hypothesis is questionable.

We should pay special attention to the Trepcza complex due to the number of 9th–10th century arrowheads with tangs and flat leaves that have been discovered. Most artefacts of this kind excavated from Bohemian, Moravian, Slovakian and Southern Polish strongholds are related to Magyar influences,³⁹ or simply considered traces of invasions of Nomads on the territories influenced by Great Moravia⁴⁰. A couple of Moravian graves (Břeclav-Pohansko, Brankovice) containing human remains with tang arrowheads lodged in the bodies are related to these violent events (KOUŘIL 2008, 128, Fig. 16; UNGER 2008, 131, Fig. 1–2). These finds seem to confirm M. SCHULZE-DÖRRLAMM’s (2002) thesis, according to which analogous artefacts determine the extent of the Magyars’ military penetration in the end of the 9th and the first half of the 10th centuries in Western and Central Europe. In the light of numerous parallels from Old Magyar graves

(e.g. SEBESTYÉN 1932, Fig. 12–13)⁴¹ this hypothesis is likely to be probable, but only with regard to Moravian, Bohemian and West European sites, due to the fact that these territories were free of the presence of the aggressors who used arrows with this kind of arrowhead in subsequent years. In the case of Lesser Poland (and also Slovakia) the situation is far more complex. One has to remember that after the mid-10th century, especially in Eastern Poland, we have to take into account the presence of Eastern European Nomads, who used arrowheads of a similar shape (Medvedev 1966). Examples of these may be the tang arrowheads discovered at the stronghold in Podegrodzie, which should be dated to the 11th century⁴² (POLESKI 2004, 172, Fig. 152:2–4) – so they could not be associated with the Magyars. In the case of the Lendian tribe one should also remember that they neighboured and were in contact with the Pechenegs (PARCZEWSKI 2007, 170, Fig. 3, 6).

As far as we are concerned, there are no clear traces of contacts between the Lendians and East European Nomads before the 11th century. However, the latest excavations conducted at site 25 indicate that the fall of the tribal Trepcza complex occurred during very violent events, and may have been caused by archers, who used reflex bows. From two small plateaus, where two semi-dugouts, two farm buildings and four other features were recorded, come at least 29 arrowheads, including 15 with tangs and flat leaves. Two of them were discovered in the fill of semi-dugout 1, which had been burnt. We cannot exclude that it had some connection with the hiding of the hoards of iron objects in the early 10th century, which we mentioned before. As was shown above, the best analogies for the arrowheads with tangs discovered in the Trepcza complex come from the Magyar milieu. We are quite certain that the

39 ŠALKOVSKÝ 2002, 179; JAWORSKI 2005, 283–284.

40 LUTOVSKÝ/MICHÁLEK 2000, 140–141; ŚWIĘTOSŁAWSKI 2006, 123–124; KOUŘIL 2008, 114, 117.

41 The authors are indebted to Mr. Ádám Bíró from the Archaeological Institute of the Hungarian Academy of Sciences in Budapest for his help with accessing hard-to-obtain literature.

42 On the other hand, scholars suggest that these kinds of arrowheads may have appeared in the Slavic milieu in the period before the Magyars had come to the Carpathian Basin. One should also mention the artefacts from Pobedim which are dated to the period before the mid-9th century (BIALEKOVÁ 1981, 90, Fig. 43).

Magyars may have been involved in destroying these features (KOTOWICZ 2005a, 68–69).

This hypothesis is supported by the existence of a Magyar garrison who stayed with their families in nearby Przemyśl (the distance between Trepcza and Przemyśl is only 52 km as the crow flies).⁴³ The remains of these troops were found in a cemetery discovered on the left riverbank of the town (KOPERSKI/PARCZEWSKI 1978; KOPERSKI 1996; 2003). It is hard to imagine that a garrison which stayed several dozen or so kilometres north-east of Trepcza and – as is often assumed – was to take control of the strategic places – in this case the Carpathian passes – could afford to have a powerful stronghold (or strongholds) placed almost in the outlet of the secured territory (PARCZEWSKI 1991, 40–41). This of course raises a question about the type of relations between the Lendian tribe and Magyars. Was it only based on the argument of force, as we suggested earlier, or could it have become more peaceful? A note about Slavic-Magyar relations can be found in the works of Arab author Ibn-Rosteh from the beginning of the 10th century, where he indicates that it could have taken on rather a hostile character. He mentions that they rule over all the neighbouring Slavs, demanding heavy tribute from them, and they are in their hands as war slaves. [...] They also organise plundering campaigns against the Slavs (PARCZEWSKI 2005, 31).

Summary

The article is concerned with the early medieval military artefacts which were found during archaeological excavations in the Trepcza complex (Sanok District, Podkarpackie Voivodeship). The early medieval settlement complex in Trepcza is located in the south-eastern, Carpathian part of Poland (Fig. 1). It is composed of several elements: two strongholds (“Horodna,” site 1 and “Horodyszczę,” site 2), a barrow cemetery (site 3) and the “Horodna” stronghold suburbium (site 25).

The most important finds seem to be a battle-axe similar to Great Moravian Type bradatica, as well as

43 The latest hypothesis according to which this cemetery should be dated later, to the first quarter of the 11th century (FLOREK 2010), is so far, in our opinion, poorly documented.

Souhrn

Prvky výzbroje z 9. a. 10. století z komplexu Trepcza u Sanoku v jihovýchodním Polsku. Tento článek pojednává o raně středověké výzbroji nalezené během vykopávek v komplexu Trepcza (okres Sanok v Podkarpackém vojvodství). Raně středověký sídelní komplex v Trepcze se nachází v jihovýchodní, karpatské části

an axe with a cap and wings (Fig. 4:1–2). We were not able to classify four other axe fragments discovered at site 25. The most numerous and interesting category of finds from the Trepcza complex, which have numerous parallels in both Slavic and Nomadic milieus, are arrowheads (34 artefacts). There are socket and tang specimens with diverse forms of leaves among them (Fig. 4:7–11, 6–7). The most interesting finds seem to be the triple-winged arrowheads with tang and socket (Fig. 4:7, 6:1, 7:1). A defensive weapon is decently represented by a single ring from some chain mail (0.9–1.0 cm in diameter), made of an oval cross-sectioned wire with flattened and riveted ends (Fig. 5:5). In the area of the Trepcza complex two “eyelet” and three hook-like spurs as well as three strap loops for spurs have been found (Fig. 4:3–6, 5:8–10). Another military element from Trepcza is a fragment of an iron bit (Fig. 8). Bits of this type usually had curb bits, which did not survive in the case of the artefact from Trepcza. The last military artefact from Trepcza is a partially-preserved flat horseshoe without calkins, with three holes for nails (Fig. 5:7).

Military artefacts from the Trepcza complex form one of the largest collections of this kind, not only in south-eastern Poland. They were probably used in the 9th (second half?) and probably the beginning of the 10th centuries. Most of the characteristic elements of the aforementioned weaponry have their closest parallels in the southern world – in the Great Moravian or Nomadic milieus; some of them could have been locally produced. The best analogies for the arrowheads with tangs discovered in the Trepcza complex come from the Magyar milieu. We are quite certain that the Magyars may have been involved in destroying these features.

Answers to all the key questions posed in this paper can only be given by further excavation of the sites mentioned and studies of the particular categories of finds. Today we can say with confidence that the territory near the River San in the Early Middle Ages was not a periphery of the known world, and did not escape the cultural changes involving the whole Carpathian and Sudetes zone. What is more, this area may have been the place from which cultural novelties, including military ones, spread in a north-easterly direction.

Polska (Fig. 1). Sestává z těchto částí: dvě pevnosti („Horodna“, lokalita 1, a „Horodyszczę“, lokalita 2), mohylové pohřebiště (lokalita 3) a suburbium opevnění „Horodna“ (lokalita 25).

Nejdůležitějšími nálezy jsou zřejmě sekera podobná velkomoravské bradatici a sekera s roztepaným tylem

(Fig. 4:1–2). Další čtyři fragmenty nalezené v lokalitě 25 se nepodařilo klasifikovat. Nejpčetnější a nejzajímavější kategorií nálezů z komplexu Trepcza jsou hroty šípů (34 artefaktů), ke kterým existují četné paralely ve slovanském i nomádkém prostředí. Jsou zde vzorky hrotů s různými tvary čepelí, a to jak s trnem, tak s tulejí (Fig. 4:7–11, 6–7). Nejzajímavější jsou zřejmě trojhrbité hroty s trny a tulejemi (Fig. 4:7, 6:1, 7:1). Obranné prvky zastupuje kroužek z kroužkového brnění (průměru 0,9–1,0 cm), vyrobený z drátu s oválným průřezem se zploštělými, snýtovanými konci (Fig. 5:5). V areálu komplexu Trepcza byly nalezeny také dvě ostruhy s očky, tři s háčky a tři průvlečky na řemeny (Fig. 4:3–6, 5:8–10). Dalším prvkem výzbroje, který zde byl nalezen, je fragment železného udidla (Fig. 8). Tento typ většinou obsahuje páková udidla, která se zde

ale nedochovala. Posledním válečnickým artefaktem nalezeným v Trepczy je částečně dochovaná podkova bez ozubů se třemi otvory na podkováky (Fig. 5:7).

Sbírka vojenských artefaktů z komplexu Trepcza je jednou z nejrozsáhlejších svého druhu, a to nejen v jihovýchodním Polsku. Tyto artefakty byly pravděpodobně používány v 9. století (zřejmě v jeho 2. polovině) a na začátku století desátého. K většině charakteristických prvků zmiňovaných zbraní existuje nejbližší paralela jižním směrem – v prostředí Velké Moravy a u nomádů; některé z artefaktů mohly být i lokální výroby. Jak zaznělo na přednášce, nejbližší analogie hrotů šípů s trny nalezených v komplexu Trepcza pocházejí z maďarského prostředí. Je téměř jisté, že Maďaři se podíleli na destrukci tohoto komplexu.

References

- BARTOŠKOVÁ 1986 – A. Bartošková, Slovanské depoty železných předmětů v Československu. Studie Arch. Ústavu ČSAV Brno 13 (Brno 1986).
- BAXA 1981 – P. Baxa, Podkúvanie na Slovensku v 11.–13. Storočí. Slovenská Arch. 29(2), 1981, 425–443.
- BIALEKOVÁ 1977 – D. Bialeková, Sporen von slavischen Fundplätzen in Pobedim (Typologie und Datierung). Slovenská Arch. 25(1), 1977, 103–160.
- BIALEKOVÁ 1981 – D. Bialeková, Dávne slovanské kováčstvo (Bratislava 1981).
- BIALEKOVÁ 1985 – D. Bialeková, Stredoveké podkovy z Pobedima. Archeologické výskumy a nálezy na Slovensku v roku 1984 (Nitra 1985) 58–60.
- BOBER 2006 – M. Bober, Znaleziško grzywny grotopodobnej (?) z Przemyśla. Acta Arch. Carpathica 41, 2006, 171–177.
- BUBENÍK 2006 – J. Bubeník, Hradiště Rubín u Podbořan v severozápadních Čechách v raném středověku. Stud. Mediaevalia Pragensia 7, 2006, 21–37.
- CHMIELOWSKA 1984 – A. Chmielowska, Militaria z Czerchowa. Z Otchłani Wieków 50(1), 1984, 30–31.
- ČILINSKÁ 1973 – Z. Čilinská, Frühmittelalterliches Gräberfeld in Želovce (Bratislava 1973).
- DZIEDUSZYCKI/WRZESIŃSKI 2008 – W. Dzieduszycki/J. Wrzesiński (eds.), Epidemie, klęski, wojny. Funeraria Lednickie 10 (Poznań 2008).
- DOSTÁL 1957 – B. Dostál, Slovanský mohylník u Žlutavy (Příspěvek k problematice slovanských mohylníků na Moravě). Sborník Prací Fil. Fak. Brno, Řada Archeologicko-Klasická VI(2), 1957, 37–74.
- DOSTÁL 1966 – B. Dostál, Slovanská pohřebiště ze střední doby hradištní na Moravě (Praha 1966).
- FARKAŠ 2006 – Z. Farkaš, Stredoveké opevnenie v Stupave, poloha Dračí hrádok. Zborník Slovenského Narod. Múz. – Arch. 100(16), 2006, 235–303.
- FARKAŠ 2007 – Z. Farkaš, Nový nález stredovekého hrotu šípu zo Stupavy – Dračieho hrádka. Zborník Slovenského Narod. Múz. – Arch. 101(17), 2007, 215–230.
- FLOREK 2010 – M. Florek, Węgrzy w Przemyślu. Historia alternatywna. In: J. Podgórska-Czopek (ed.), Varia Sententiae. Księga Jubileuszowa Działu Archeologii Muzeum Okręgowego w Rzeszowie (Rzeszów 2010) 101–129.
- FODOR 1996a – I. Fodor, The Ancient Hungarians. Exhibition catalogue (Budapest 1996).
- FODOR 1996b – I. Fodor, Muszka (Musca, Romania). In: FODOR 1996a, 340–341.
- GANCARSKI 2003 – J. Gancarski, The early medieval stronghold at Trzcinnica in the district of Jasło: preliminary research results. In: Z. Woźniak/J. Gancarski (eds.), Polonia Minor Medii Aevii (Kraków – Krosno 2003) 263–276.
- GANCARSKI 2006 – J. Gancarski (ed.), Wczesne średniowiecze w Karpatach polskich (Krosno 2006).
- GARDAWSKI 1970 – A. Gardawski, Chodlik. Wczesnośredniowieczny zespół osadniczy (Wrocław – Warszawa – Kraków 1970).
- GINALSKI 1997 – J. Ginalski, Wczesnośredniowieczne depozyty przedmiotów żelaznych z grodziska “Fajka” w Trepczy koło Sanoka. Spraw. Arch. 49, 1997, 221–241.
- GINALSKI 1999/2000 – J. Ginalski, Enkolpiony z grodziska “Horodyszczce” w Trepczy koło Sanoka. Acta Arch. Carpathica 35, 1999/2000, 211–262.
- GINALSKI 2001 – J. Ginalski, Wczesnośredniowieczny zespół sakralny na grodzisku “Horodyszczce” w Trepczy koło Sanoka. In: J. Gancarski (ed.), Początki chrześcijaństwa w Małopolsce. Dzieje Podkarpacia 5 (Krosno 2001), 349–377.
- GINALSKI/GLINIANOWICZ/KOTOWICZ 2013 – J. Ginalski/M. Glinianowicz/P. N. Kotowicz, Elementy “południowe” w kulturze materialnej mieszkańców Kotliny Sanockiej w IX–X w. In: J. Gancarski (ed.), Transkarpackie kontakty kulturowe w okresie lateńskim, rzymski i wczesnym średniowieczu (Krosno 2013) 381–432.
- GINALSKI/KOTOWICZ 2004 – J. Ginalski/P. N. Kotowicz, Elementy uzbrojenia i oporządzenia jeździeckiego z grodziska wczesnośredniowiecznego “Horodyszczce” w Trepczy, pow. Sanok, stan. 2. Mat. i Spraw. 25, 2004, 187–257.

- GLINIANOWICZ/KOTOWICZ 2008 – M. Glinianowicz/P. N. Kotowicz, Militaria wczesnośredniowieczne z latopisowego Sanoka. In: *Starodavnij Iskorosten' i slov'anski gradi 1* (Korosten' 2008) 81–94.
- GÓRA/KOTOWICZ 2008/09 – M. Góra/P. N. Kotowicz, Ornametowany czełk z wczesnośredniowiecznej osady obronnej w Barkowicach Mokrych koło Sulejowa. *Prace i Mat. Muz. Łódź* 44, 2008/09, 237–263.
- HANULIAK 2004 – M. Hanuliak, Veľkomoravské pohrebiská. Pochovánie v 9.–10. storočí na území Slovenska (Nitra 2004).
- JANOWSKI 1973 – J. Janowski, Wczesnośredniowieczne ciałopalne cmentarzysko kurhanowe w Trecpzy pow. Sanok. *Mat. i Spraw. za lata 1968/69, 1973*, 105–112.
- JANOWSKI 1984 – J. Janowski, Wyniki badań wykopaliskowych na cmentarzysku kurhanowym w Trecpzy, woj. Krosno. *Spraw. Arch.* 35, 1984, 233–248.
- JAWORSKI 2005 – K. Jaworski, Grody w Sudetach (VIII–X w.) (Wrocław 2005).
- KAVÁNOVÁ 2003 – B. Kavánová, Mikulčice – pohřebišťe v okolí 12. kostela. In: PROFANTOVÁ/KAVÁNOVÁ 2003, 211–413.
- KAZAKEVIČIUS 2004 – V. Kazakevičius, Geležies amžiaus strėlės lietuvoje II – XII/XIII amžius (Vilnius 2004).
- KAŹMIERCZYK 1978 – J. Kaźmierczyk, Podkowy na Śląsku w X–XIV wieku. *Studia z dziejów kultury materialnej* (Wrocław – Warszawa – Kraków – Gdańsk 1978).
- KIRPIČNIKOV 1966 – A. H. Kirpičnikov, Drevnerusskoe orużie. Vyp. 2. Kopja, sulicy, boevye topory, bulavy, kisteny IX–XIII vv. *Archeologija SSSR, Svod archeologičnych istočnikov E1–36* (Moskva – Leningrad 1966).
- KIRPIČNIKOV 1973 – A. H. Kirpičnikov, Snarjażenie vsadnika i verchovogo konja na Rusi IX–XIII vv., *Archeologija SSSR. Svod archeologičnych istočnikov E1–36* (Leningrad 1973).
- KLANICA 2006 – Z. Klanica, Nechvalín, Prušánky. Čtyři slovanská pohřebišťe I–II. *Spisy Arch. Ústavu AV ČR Brno* 28 (Brno 2006).
- KONCZEWSKA/KONCZEWSKI 2010 – M. Koncziwska/P. Koncziwski, Góry Żłote. *Silesia Ant.* 46, 2010, 171–176.
- KOPERSKI 1996 – A. Koperski, Przemyśl. In: FODOR 1996a, 439–448.
- KOPERSKI 2003 – A. Koperski, Groby wojowników z koniem na cmentarzysku “staromadziarskim” w Przemyślu. In: M. Dulicz (ed.), *Słowianie i ich sąsiedzi we wczesnym średniowieczu* (Warszawa – Lublin 2003) 365–374.
- KOPERSKI/PARCZEWSKI 1978 – A. Koperski/M. Parczewski, Wczesnośredniowieczny grób Węgra-koczownika z Przemyśla. *Acta Arch. Carpathica* 18, 1978, 152–199.
- KOTOWICZ 2002 – P. N. Kotowicz, Militaria średniowieczne w zbiorach Muzeum Historycznego w Sanoku (Sanok 2002).
- KOTOWICZ 2005a – P. N. Kotowicz, System military Sanoka we wczesnym średniowieczu. *Acta Militaria Mediaevalia* 1, 2005, 61–86.
- KOTOWICZ 2005b – P. N. Kotowicz, Źelazna przewleczka z grodziska wczesnośredniowiecznego “Horodna” w Trecpzy stan. 1, pow. Sanok, *Rocznik Przemyski, Arch.* 41(2), 2005, 113–124.
- KOTOWICZ 2006a – P. N. Kotowicz, Zabytki archeologiczne z okolic grodziska wczesnośredniowiecznego “Horodna” w Trecpzy, pow. Sanok, stan. 1. In: GANCARSKI 2006, 454–500.
- KOTOWICZ 2006b – P. N. Kotowicz, Przemiany w uzbrojeniu plemiennym i wczesnopaństwowym (VI – poł. XIII w.) w polskiej części dawnych księstw ruskich – wybrane przykłady. In: *Derżava ta Armia, Visnik Nacionalnogo Universitetu “Lvivs'ka Politehnika”* 571, 2006, 18–47.
- KOTOWICZ 2008a – P. N. Kotowicz, Zespól obiektów wczesnośredniowiecznych na osadzie wielokulturowej nr 10 w Sanoku-Olchowcach. *Mat. i Spraw.* 29, 2008, 21–36.
- KOTOWICZ 2008b – P. N. Kotowicz, Wczesnośredniowieczny topór z miejscowości Kryniczki w powiecie zamojskim. *Silesia Ant.* 44, 2008, 170–175.
- KOTOWICZ 2008c – P. N. Kotowicz, “...wszystką jego broń umieścili obok niego...” Pochówki wojowników (?) na wczesnośredniowiecznych, ciałopalnych cmentarzyskach kurhanowych z terenu Polski. In: *DZIEDUSZYCKI/WRZESIŃSKI* 2008, 363–383.
- KOTOWICZ 2009 – P. N. Kotowicz, Dwie wczesnośredniowieczne bradatice z południowej Lubelszczyzny. In: H. Taras/A. Zakościelna (eds.), *Hereditas praeteriti. Additamenta archaeologica et historica dedicata Ioanni Gurba Octogesimo Anno Nascendi* (Lublin 2009) 383–396.
- KOTOWICZ/MICHALAK 2007/08 – P. N. Kotowicz/A. Michalak, Status of Research on Early–Medieval Armament in Małopolska. Remarks Regarding the Monograph Study by Piotr Strzyż (2006A). *Acta Arch. Carpathica* 42–43, 2007/08, 371–417.
- KOTOWICZ/ŚWIĄTEK 2006 – P. N. Kotowicz/M. Świątek, Mittelalterliche Streitäxte au den Sammlungen des Regionalmuseums in Jasło. Ein Beitrag zur Kenntnis der Bewaffnung in den polnischen Karpaten. *Acta Arch. Carpathica* 41, 2006, 115–145.
- KOUŘIL 2008 – P. Kouřil, Archeologické doklady nomádského vlivu a zásahu na území Moravy v závěru 9. a v 10. století. In: T. Štefanovičová/D. Hulínek (eds.), *Bitka pri Bratislave v roku 907 a jej význam pre vývoj stredného Podunajska* (Bratislava 2008) 113–135.
- KURNATOWSKA 1973 – Z. Kurnatowska, Elementy uzbrojenia i oporządzenia jeździeckiego z wczesnośredniowiecznego grodziska Styrmen w Bułgarii. *Slavia Ant.* 20, 1973, 87–124.
- KUŚNIERZ 2006 – J. Kuśnierz, Z badań nad militarym znaczeniem Gródka nad Bugiem (Wołynia) we wczesnym średniowieczu. *Acta Militaria Mediaevalia* 2, 2006, 79–102.
- KUŚNIERZ 2009 – J. Kuśnierz, Znaleziiska wczesnośredniowiecznych militariów w międzyrzeczu Wisły i Bugu jako materialne ślady konfliktów zbrojnych na pograniczu polsko-ruskim. In: E. Banasiewicz-Szykuła (ed.), *Pogranicze polsko-ruskie we wczesnym średniowieczu na Lubelszczyźnie* (Lublin 2009) 139–166.

- ŁOJOWSKA 2006 – K. Łojowska, Wczesnośredniowieczna ceramika z grodziska “Horodyszczce” w Trepczy koło Sanoka. In: GANCARSKI 2006, 391–451.
- LUTOVSKÝ/MICHÁLEK 2000 – M. Lutovský/J. Michálek, Archeologie násilného zániku: pád Hradce u Némětic. Arch. Mediaevalis Moravia et Silesiana 1, 2000, 133–142.
- MEDVEDEV 1966 – A. M. Medvedev, Ručnoe metatel’noe oružie (luk i strely, samostrel) VIII–XIV vv., Archeologija SSSR. Svod archeologičnykh istočnikov E1–36 (Moskva, Leningrad 1966).
- MĚCHUROVÁ 1984 – Z. Měchurová, Součástí uzděni koně ve velkomoravském období. Arch. Historica 9, 1984, 263–292.
- MESTERHÁZY 1996a – K. Mesterházy, Ártánd – Nagyfarkasdomb. In: FODOR 1996a, 211–214.
- MESTERHÁZY 1996b – K. Mesterházy, Neszmély. In: FODOR 1996a, 371.
- NADOLSKI 1954 – A. Nadolski, Studia nad uzbrojeniem polskim w X, XI i XII wieku (Łódź 1954).
- NEPPER 2002 – I. M. Nepper, Hajdú-Bihar Megye 10–11. századi sírleletei, 2. rész (Budapest – Debrecen 2002).
- OKOŃSKI/SZPUNAR/SZPUNAR 2002 – J. Okoński/B. Szpunar/A. Szpunar, Materiały wczesnośredniowieczne ze środkowego biegu Wisłoki. Mat. i Spraw. 23, 2002, 141–171.
- PARCZEWSKI 1991 – M. Parczewski, Początki kształtowania się polsko-ruskiej rubieży etnicznej w Karpatach. U źródeł rozpadu Słowiańszczyzny na odłam wschodni i zachodni (Kraków 1991).
- PARCZEWSKI 1996 – M. Parczewski, Rezultaty badań wykopaliskowych w Bachórze w latach 1993–1995. Mat. i Spraw. 17, 1996, 263–282.
- PARCZEWSKI 2005 – M. Parczewski, Uwagi o przejawach wczesnośredniowiecznej aktywności militarnej w północnych Karpatach, Acta Militaria Mediaevalia 1, 2005, 27–36.
- PARCZEWSKI 2007 – M. Parczewski, Problem Łędzian a kształtowanie się polsko-ruskiej rubieży etnicznej. In: M. Dębiec/M. Wołoszyn (eds.), U źródeł Europy Środkowo-Wschodniej: pogranicze polsko-ukraińskie w perspektywie badań archeologicznych (Rzeszów 2007) 161–176.
- PARCZEWSKI/POHORSKA-KLEJA 1995 – M. Parczewski/E. Pohorska-Kleja, Najdawniejsze dzieje Sanoka. In: F. Kiry (ed.), Sanok. Dzieje miasta (Kraków 1995) 45–88.
- PASTERNAK 1937 – J. Pasternak, Die Ersten Altungarischen Grabfunde nördlich der Karpaten. Arch. Hungarica 21, 1937, 1–7.
- PLEINER 2002 – R. Pleiner, Metalografický výzkum velkomoravské kroužkové zbroje z Břeclavi-Pohanska. Stud. Arch. Brunensia 7, 2002, 77–81.
- POHORSKA-KLEJA 2006a – E. Pohorska-Kleja, Materiały wczesnośredniowieczne z wielokulturowej osady w Sanoku, stan. 54, woj. podkarpackie. In: GANCARSKI 2006, 177–190.
- POHORSKA-KLEJA 2006b – E. Pohorska-Kleja, Die Ergebnisse der Forschungen auf der Siedlung mehrerer Kulturen in Sanok, Woiw. Podkarpackie. FSt. 54. Recherches Archéologiques de 1999/2003, 2006, 212–220.
- POLESKI 1999/2000 – J. Poleski, Chronologia wczesnośredniowiecznego grodziska w Łapczycy koło Bochni. Acta Arch. Carpathica 35, 1999/2000, 191–209.
- POLESKI 2004 – J. Poleski, Wczesnośredniowieczne grody w dorzeczu Dunajca (Kraków 2004).
- POLESKI 2009 – J. Poleski, Awarische Funde in Polen. Zur Frage der Gestaltung von Kulturzonen bei den Westslaven in der zweiten Hälfte des 7. Jhs. – Anfang des 10. Jhs. Acta Arch. Carpathica 44, 2009, 97–136.
- PORADYŁO 2002 – W. Poradyło, Pierwszy sezon badań wykopaliskowych na wielokulturowym stanowisku nr 1 w Sanoku-Olchowcach. Rocznik Przemyski, Arch. 38(2), 2002, 61–68.
- PRYŠČEPA/NIKOL’ČENKO 1996 – B. A. Pryščepa/Ju. M. Nikolčenko, Litopysnyj Dorohobuż v period Kyjvs’koj Rusi do istorii naseleńnja Zachidnoï Volyni v X–XIII st (Rivne 1996).
- PROFANTOVÁ 1993 – N. Profantová, K nálezům ostruh z konce 7.–9. stol. v Čechách. Mediaevalia Arch. Bohemica 1993, 1993, 60–85.
- PROFANTOVÁ 2003 – N. Profantová, Mikulčice – pohřebiště u 6. kostela: pokus o chronologické a sociální zhodnocení. In: PROFANTOVÁ/KAVÁNOVÁ 2003.
- PROFANTOVÁ/KAVÁNOVÁ 2003 – N. Profantová/B. Kavánová, Mikulčice – pohřebiště u 6. a 12. kostela (Brno 2003).
- RUTTKAY 1975 – A. Ruttkay, Waffen und Reiterausrüstung des bis 9. zur ersten Hälfte des 14. Jahrhunderts in der Slowakei (I). Slovenská Arch. 23(1), 1975, 119–216.
- RUTTKAY 1976 – A. Ruttkay, Waffen und Reiterausrüstung des bis 9. zur ersten Hälfte des 14. Jahrhunderts in der Slowakei (II). Slovenská Arch. 24(2), 1976, 245–395.
- RZEŹNIK 2006 – P. Rzeźnik, Problem tezauryzacji mis żelaznych typu śląskiego w świetle tzw. skarbów jednorodnych. Fontes Arch. Posnanienses 42, 2006, 175–225.
- ŠALKOVSKÝ 2002 – P. Šalkovský, Sekerovité hrivny a ďalšie včasnostredoveké nálezy z hradiska v Bojne. Štud. Zvesti Arch. Ústavu 34, 2002, 171–188.
- SCHULZE-DÖRRLAMM 2002 – M. Schulze-Dörrlamm, Die Ungarneinfälle des 10. Jahrhunderts im Spiegel archäologischer Funde. In: J. Henning (ed.), Europa im 10. Jahrhundert. Archäologie einer Aufbruchzeit (Mainz 2002) 109–122.
- SEBESTYÉN 1932 – K. Cs. Sebestyén, „A sagittis Hungarorum...” A Magyarok ijja és nyila. Dolgozatok 8, 1932, 167–255.
- SİKORA 2007 – J. Sikora, Polska Centralna we wczesnym średniowieczu w świetle badań archeologicznych i osadniczych. Slavia Ant. 48, 2007, 125–159.
- ŠIMČÍK 2007 – P. Šimčík, Fragmety krúžkovej zbroje z lokalit Smolenice-Molpír a Dolné Orešany – poloha Železník. Zborník Slovenského Národ. Múz. – Arch. 101(17), 2007, 175–188.
- STAŠŠÍKOVÁ-ŠTUKOVSKÁ et al. 2006 – D. Staššíková-Štukovská/P. Šalkovský/J. Béreš/E. Hajnalová/E. Huštaková/Z. Krempaská/F. Javorský, Včasnostredoveké Hradisko I Spišské Tomášovce – Smižany – 1. etapa spracovania.

- Zborník Slovenského Narod. Múz. – Arch. 100(16), 2006, 187–234.
- STRZYŻ 2006 – P. Strzyż, Uzbrojenie we wczesnośrednio-wiecznej Małopolsce (Łódź 2006).
- ŚWIĄTKIEWICZ 2002 – P. Świątkiewicz, Uzbrojenie wczesnośredniowieczne z Pomorza Zachodniego (Łódź 2002).
- ŚWIĄTKIEWICZ 2010 – P. Świątkiewicz, Militaria ze średniowiecznego grodziska w Raciążu. *Acta Militaria Mediaevalia* 6, 2010, 7–92.
- ŚWIĘTOSŁAWSKI 2006 – W. Świętosławski, Ślady koczowników Wielkiego Stepu z X, XI i XII wieku w dorzeczu Wisły i Odry (Łódź 2006).
- SZYDŁOWSKI 1970 – J. Szydłowski, Wczesnośredniowieczne grodzisko w Lubomi, pow. Wodzisław Śląski. *Spraw. Arch.* 22, 1970, 173–191.
- TOČÍK 1968 – A. Točík, *Altmagyarische Gräberfelder in der Südwestslowakei* (Bratislava 1968).
- TURČAN 2000 – V. Turčan, Príspevok k poznaniu včasnostredovekého osídlenia sv. Jura pri Bratislave, *Zborník Slovenského Narod. Múz. – Arch.* 94(10), 2002, 123–136.
- TYNIEC 1991 – A. Tynec, Fragment ostrogi z grodziska w Wietrznie-Bóbrce. *Acta Arch. Carpathica* 30, 1991, 249–252.
- UNGER 2008 – J. Unger, Epidemie a války 9. až 20. stol. v archeologických nálezeh lidských pozůstatků a ostatků moravy a Slezska. In: *DZIEDUSZYCKI/WRZESIŃSKI* 2008, 129–138.
- WACHOWSKI 1991 – K. Wachowski, Oddziaływania zachodnie na wytwórczość ostróg haczykowatych u Słowian. *Przegląd Arch.* 38, 1991, 85–107.
- WACHOWSKI 1992 – K. Wachowski, *Kultura karolińska a Słowiańszczyzna Zachodnia*. *Stud. Arch.* 23 (Wrocław 1992).
- ZÁBOJNÍK 2004 – J. Zábojník, *Slovensko a Avarský Kaganát* (Bratislava 2004).
- ŽAKI 1957 – A. Žaki, Wietrznów – wczesnośredniowieczny gród graniczny w świetle badań lat 1952–53. *Wiadomości Arch.* 24(1), 1957, 1–32.

Piotr N. Kotowicz, M.A.
Muzeum Historyczne w Sanoku
Zamkowa 2
PL-38 500 Sanok
E-mail: p_kotowicz@o2.pl

Marcin Glinianowicz, M.A.
Muzeum Budownictwa Ludowego w Sanoku
Traugutta 3
PL-38 500 Sanok
E-mail: marcin.glinianowicz@gmail.com

Dr Arkadiusz Michalak
Muzeum Archeologiczne Środkowego Nadodrza
w Zielonej Górze
Długa 27
PL-66 008 Świdnica k. Zielonej Góry
E-mail: a.michalak@muzeum-swidnica.org

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